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Photo: Jim Block

Carnegie Mellon University's Mountain View, Calif., campus.

MASTERING SOFTWARE MANAGEMENT AT CMU

Academic program bridges IT, business

BY ALAN ZEICHICK

The old military building that Carnegie Mellon University calls its Mountain View, Calif., campus is dwarfed by a nearby zeppelin hanger. But the building, housed in the Moffett Federal Airfield, formerly a naval air station and currently operated by NASA, northwest of San Jose in the heart of Silicon Valley, offers one of the most modern educational programs: the new Masters of Science in Software Management.

Carnegie Mellon, based in Pittsburgh, has been offering courses in Northern California since 2002. The cornerstone of the small, 150-student extension campus, formally called Carnegie Mellon West, has been its traditional Masters of Computer Engineering course. However, CMU says that the new Masters of Software Management program, which launches this fall, is one of the first programs of its sort in the world.

The intent of the program, explained Diane Dimeff, associate dean, is to serve working software professionals. "We talked to hiring managers and executives in Silicon Valley," she said. "We want techies who can talk to executives, marketing professionals and financial experts. We want them to think like executives, marketing professionals and financial experts." In other words, groom the next generation of business leaders, who can apply computer science and software development both for entrepreneurial startups and Silicon Valley's largest behemoths.

To be part of the Masters in Software Management program, the prerequisite is that students already be working as software engineers, project managers or as senior software developers or software architects. In many ways, the new program can be thought of as a specialized Masters of Business Administration program for software managers. It's not a true

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Sun, Harmony Project Hit Discordant Note

BY ALEX HANDY

With Harmony nearing completion, the focus now is on the Java Compatibility Kit (JCK). This suite of software tests and intellectual property agreements is all that stands between Harmony and the title of "compatible Java implementation." But as the Apache Software Foundation argued in an April 10 open letter to Sun Microsystems CEO Jonathan Schwartz, it's the intellectual property and the software patents associated with implementing Java that could keep Harmony from being certifiably compliant.

Harmony is an Apache-licensed form of Java SE 5—the JSR 176-compliant edition of Java 2 version 1.5. Sun, meanwhile, is working on a now-confirmed GPLv2-licensed Java SE 6—the JSR 270-compliant form of Java 2 version 1.6.

Geir Magnusson Jr., the lead developer on the Harmony project, drafted the open letter to Sun. In it, he wrote: "The JCK license Sun is offering imposes IP rights restrictions through limits on the 'field of use' available to users of our software. These restrictions are totally unacceptable to us."

Specifically, Magnusson said that Sun's license for the JCK not only defines a method for testing compatibility, but also grants amnesty for any patents or intel-

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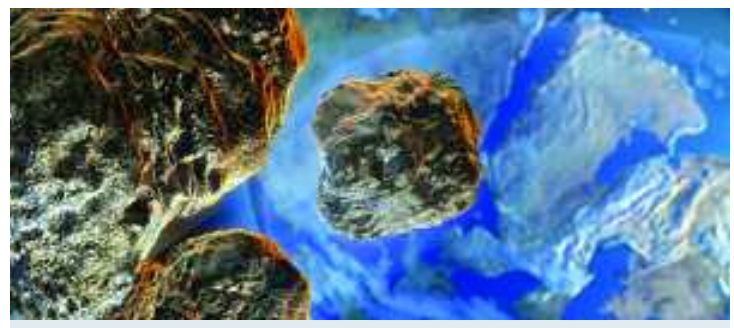

When Technologies Collide

SaaS, SOA, Web 2.0 thrown at managers

BY DAVID S. LINTHICUM

IT departments will soon face some new challenges as software as a service, service-oriented architecture and the next-generation Web (Web 2.0) begin to have an effect on the modern enterprise. The days of managing IT departments as their own private fortresses of company information will disappear as IT becomes a global community. Critical elements of your customer, product and business data and processes will be populated by sources beyond your firewalls to become true real-time systems that deliver and integrate information as diverse as up-to-the-minute cus-

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David S. Linthicum is the CEO of the Linthicum Group, a SOA consulting and advisory firm.

WebMethods Acquired By Software AG

Purchase bolsters SOA, market share

BY DAVID WORTHINGTON

Software AG has made a US$546 million cash tender offer to acquire WebMethods, which sells SOA and integration software.

The combined company will compete in both the service-oriented architecture (SOA) and business process management systems markets with a customer base of over 4,000 organizations and 100 partners, more than doubling Software AG's presence in North America.

Jason Bloomberg, an analyst with ZapThink, commented on the acquisition: "This is huge news in the SOA space, because

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WebLogic Server 10 Goes Beyond Java EE 5

BEA's enhancements deliver annotations; WebLogic Workshop now based on Eclipse

BY DAVID WORTHINGTON

When it released WebLogic Server 10 on March 30, BEA Systems made no bones about it; the company considers this to be a significant release. First and foremost, BEA implemented Java EE 5 in WebLogic with its own enhancements for developers. In addition, WebLogic now supports a wider set of specifications for Web services.

Blake Connell, director of WebLogic Server product marketing at BEA, said that the primary focus for WebLogic 10 was to implement Java EE 5. BEA introduced annotations that enhance the implementation by making deployment descriptor files optional.

Annotations eliminate the need to support XML files to describe these transactions, but WebLogic still supports its legacy method, said Connell. BEA open-sourced its JPA implementation as an Apache Project called OpenJPA.

The JavaBeans 3.0 platform and IDE come with the territory. Connell pointed to the Java Persistence API (JPA), a component of Java EE 5 and EJB, as a key pillar of the release. JPA manages transactions for information storage and retrieval within data stores.

MORE CHOICE

BEA has shed some of its proprietary ways: WebLogic Workshop is now Eclipse-based, and as such, it can merge into developers' existing Eclipse environments. This provides developers with a single Eclipse instance that has access to BEA's Web services technology, said Connell.

Also, the Spring and Apache Struts frameworks can now be used to build applications for WebLogic.

The Spring framework is a system for assembling components using configuration files. BEA collaborated with Interface21, the group behind the Spring framework, to mix Spring-style development with Java EE 5 development. Apache's Struts framework is used to build Servlet/JSP based Web applications and integrates with WebLogic. Connell noted that BEA wants to extend support beyond its native framework so that developers can choose which development makes sense for them.

According to Connell, BEA has adopted JAX-WS (Java API for XML-based Web Services) 2.0 as the centerpiece for building Web services going forward, for WebLogic 10 and beyond. JAX-WS can leverage BEA's annotations style.

The administration console displays domain resource and configuration information.

BEA is using Web standards to reach for broad interoperability: It has adopted JAXB (Java Architecture for XML Binding) for Java-to-XML translation. In the simplest of terms, this means that Java code binds to XML results to create XML-based Web services that work with Microsoft's .NET platform.

Connell said the advantage of this is that Java developers can leverage their Java skills to create XML-based services. JAXB also uses annotations, but JAX-RPC (Java API for XML-Based RPC) is still supported as an alternative.

Last, service deployment has been refined. The administration console automatically records multistep functions and replays them through WebLogic's scripting tool to add some pep to deployments. Rolling upgrades reduce downtime, and clustering improvements are designed to provide high availability.

BEA will release an update to WebLogic 10 before the end of the year. Its feature set will be largely determined by customer feedback, said Connell. ▮

Microsoft Earns Merit Patches for Security

But is Redmond's medicine the right pill for dealing with new exploits?

BY DAVID WORTHINGTON

Microsoft has taken a lot of hits for perceived lack of security in its software. In response, Bill Gates gave the company's security experts carte blanche to change that perception by improving the security of its products. Over time, this resulted in the remediation process that its Security Response team follows today. But is that process effective enough to protect customers?

When either the security community or its own internal experts discover a potential problem, the team takes the lead and starts a process that begins with triaging the issue and then coordinates the security response activities that follow.

The team's first priority is scoping the exploit. After an issue is discovered, it passes through triage, and product-specific security experts are designated to investigate the scope and impact of the threat on an affected product, before the Secure Windows Initiative team evaluates the overall impact it may have on other Microsoft products, said Mark Miller, director of the Microsoft Security Response Center (MSRC).

Mike Reavey, operations manager of MSRC, expounded on this process in a April 3 Security Response Center Blog posting discussing a flaw in the way that Windows handles animated cursors and what Microsoft has done about it.

Reavey wrote in his blog that the team "drives for release" after it determines the vulnerability can be reproduced. The remediation is prioritized based upon severity, said Miller, analogous to the way hospital emergency rooms prioritize their critically ill patients. But exploits, like illnesses, can be evasive: The exact number of the afflicted is not always known up front.

From the start of the process, all possible surrounding issues are investigated. The triaging emphasizes the discovery of as many related issues as is possible. Often, this means that related vulnerabilities must be resolved to completely solve the problem, due to dependencies between Windows and other Microsoft products, Reavey wrote in his blog.

For example, MS07-017, the remedy for the animated cursor exploit, fixed not one but seven vulnerabilities. Reavey explained, in his blog, that Microsoft's customers want security updates to be as comprehensive as possible. "Customers do not want to have to apply multiple updates to address issues in the same components."

The next step in Microsoft's investigative process is to create and test security updates, a process that Reavey wrote takes an average of two months for Windows-related updates, involving hundreds of individuals worldwide. Reavey acknowledged that the testing process can run a longer course when updates modify functionality that is "pervasive and core to the operating system."

In the case of an exploit where customers are exposed to imminent risk, the level of urgency decides Microsoft's willingness to "shortcut" steps in the process—such as quality testing—to release on a faster timeline. The team weighs risk versus comprehensiveness when customers are vulnerable to exploits, Reavey wrote.

MICROSOFT'S FALLOUT

Microsoft Product Support Services and the company's Security Response Team work collectively to distribute prescriptive information to customers. "We have made a number of enhancements over the last year to provide quality information to customers, particularly when issues require real-time clarity and guidance, such as through security advisories, the MSRC blog, publishing incident pages, Webcasts, RSS feeds and syndication of our content," Miller said.

Once a patch is released, Microsoft's Security Engineering Strategy team works to prevent recurrence by establishing new processes and tools, and builds defensive measures against similar threats into upcoming products, Miller added.

Another group decides whether or not Microsoft is providing enough defense-in-depth: the right security products and services to protect customers against emerging threats. The Trustworthy Computing Team looks outside of itself and works with the industry to, as Miller said, "improve the security of the Internet ecosystem."

If there is a suspicion that criminal activity is involved, said

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It's Exam Time at The School of Secure Coding

High marks hard to come by, predict toolmakers

BY JENNIFER DEJONG

There's a new programming test on the horizon, and most professional developers working today won't pass it.

That's what application security toolmakers said about the forthcoming series of examinations expected from the SANS Institute later this year. The tests and a related certification program are designed to assess a developer's ability to write code that is difficult to crack. "Results will show that developers don't have the skills," said Watchfire CTO Mike Weider. "Most have never been trained to write secure code, and the test will highlight that."

SANS (which stands for SysAdmin, Audit, Network, Security) expects to begin administering the exams in Washington, D.C., on a pilot basis in August, followed by a worldwide rollout later this year, said Alan Paller, director of research at the for-profit organization that provides information security training and certification offerings. Six language-specific exams are planned: for C, C++, Java/J2EE, Perl, PHP and .NET/ASP.

Lending support to the SANS effort are key application security toolmakers, including Cenzic, Fortify, Ounce Labs, SPI Dynamics and Watchfire. The toolmakers are working with SANS to formulate test questions. They won't take a cut of the sales of the SANS secure coding offerings, expected to cost US$10–$200 per programmer for skills assessment alone, and $400 per programmer for assessment and certification, according to Paller. But the partnership has obvious benefits for them.

Watchfire's Weider says the tests will show that most developers lack the skills to write secure code.

"Any investment in application security is good for us," said Weider.

The tests will help create awareness of why secure coding matters, echoed SPI Dynamics security evangelist Michael Sutton. "Historically, we have not asked developers to care about security," he said. "Yesterday, security wasn't a concern of developers, but today it is."

Getting that message across has been difficult for application security toolmakers, which sell black-box testing offerings, which simulate attacks to find flaws that hackers might exploit to steal data, and source code analyzers, which scan for vulnerabilities. Despite the steady news of data breaches, companies have been slow to adopt application security tools.

According to Yankee Group analyst Andrew Jaquith, the code assurance market measures less than US$30 million in size, as reported earlier by SD Times ("Analyst: Code Scanning Won't Stand on Its Own," April 1, page 1).

MEASURING EXPERTISE

The exams are designed to measure fundamental areas of secure coding expertise. "It's not about 'What is a SQL injection?'" said Ounce Labs cofounder and chief scientist Ryan Berg. Instead, the test measures whether a developer knows "how to do things the right way in terms of security," he said. "How do you validate input properly? Can you use error handling in Java? Do you know about code access security in .NET?"

SANS and its partners began formulating questions in a meeting in Miami in February, said Berg, who participated in the gathering. "It's hard to write good questions," he said. "We don't want to trick the [test taker]. We don't want to make him read the question three times in order to figure out what's being asked."

Devising the questions is an ongoing process, with toolmakers and other contributors offering continual input, noted Paller. "We need thousands of questions."

Asked if developers would take a test they might fail, toolmakers insisted that getting an A is not the point. "It's not necessarily a scorecard," Berg said of the SANS exams. "It's a way of figuring out where you stand in terms of secure coding expertise."

SANS is also emphasizing the assessment test as a starting point. The inaugural certification exam will be administered in Washington, D.C., in August. But developers can take the skills assessment without necessarily going for certification, noted Paller.

"The assessment is all positive," he said, relating a story about a development manager who took one of the sample tests, then asked his team members to take it as well. "He failed. And his team failed," said Paller. "But taking the test is about getting a better understanding of what you know and what you don't," added Berg. ■

SOFTWARE INSECURITY

Early in 2007, the SANS Institute analyzed all critical security vulnerabilities discovered and reported during 2006 as a means of identifying the specific programming errors that caused those vulnerabilities. The research team, led by Rohit Dhamankar, of 3Com, found that three programming errors were responsible for more than 85 percent of those critical vulnerabilities.

Error 1: Accepting input from users without validating and sanitizing the input.

Error 2: Allowing data placed in buffers to exceed the length of the buffer.

Error 3: Handling integers incorrectly.

Source: www.sans-ssi.org/top_three.pdf

NEWS BRIEFS

COMPANIES

Sun Microsystems announced on April 10 the donation of ZFS administration features to the OpenSolaris community, along with other storage-related donations. These include parallel NFS (NFS 4.1), YANFS (Yet Another NFS, formerly WebNFS), the Point-In-Time Copy and Remote Mirror data services, iSCSI and SCSI OSD (Object-Based Storage Device) drivers and related software from both QLogic and Sun.

NEW PRODUCTS

Swell Software, a provider of graphics software for embedded devices, has announced the availability of the **PEG Pro** GUI development solution for the creation of graphical applications in automotive, consumer electronics and medical imaging devices. It allows rapid prototyping hosted on Windows and Linux/X11 platforms and targets many embedded processors . . . Aldon, a provider of process-driven ALM solutions, announced in early April the release of a new edition of **Aldon Lifecycle Manager.** Version 7.5, which was created exclusively for IBM's System i (the former AS/400 and iSeries) platform, offers conflict processing capabilities to help developers remedy conflicts in the development of multiple versions of software applications. The System i edition of Lifecycle Manager also has enhanced compare and merge functionalities, to simplify software upgrades.

UPDATES

Artifact Software, a provider of software development management solutions, has introduced a version of **Lighthouse** that offers tools to manage tasks, costs and resources. The new release fuses custom methodology and reports with timesheets, requirements management, bug tracking, test management and issue tracking . . . LogiXML has added geographic information system data and technology to its Web-based business intelligence platform, **Logi 8.** The GIS mapping features allow for geographic representations of spatial components involved in business data, according to LogiXML officials . . . IdeaBlade, a provider of enterprise application development tools and components for the Microsoft .NET Framework, has announced version 3.5 of its **DevForce** framework. The newest version of DevForce includes object-relational mapping, the ability to monitor the validity of objects, and the ability to retrieve rules based on the code at runtime . . . Hit Software, which offers real-time data integration, data synchronization and data access products, has announced version 5 of **Allora**, a set of design-time tools and a runtime engine enabling secure XML-to-database mapping and bidirectional transformation. The new version introduces the Allora Workflow Manager, a graphical layout editor for creating and executing management tasks . . . 4D has announced the release of **4th Dimension 2004.6,** the company's application and database development tool. The new version has full support for Windows Vista and is available for free at www.4d.com . . . VoiceSignal announced on April 5 the release of **VSuite 3.1**, a major redesign of the company's mobile speech platform. The company claims that user trials on mass-market hardware against the previous version showed up to a 75 percent improvement in accuracy and a 47 percent faster task-completion time for new users . . . HelloSoft launched its VoIP solution for Symbian OS devices on April 4. **HelloDual-Mode** is available now to device manufacturers wishing to incorporate VoIP into their mobile phones and other devices . . . XenSource's **XenEnterprise** now works with Microsoft's Windows 2000 server products, the company announced April 2. The paravirtualization tools now support up to eight processors on Windows Server 2003 and XP, according to the company . . . FatWire announced on April 11 the general availability of **FatWire Content Server 7**, offering user-defined tags, enhanced full-text search, and new interfaces for managing content and layout . . . TeleSoft International has added a pre-ported version of its **CompactSIP** SDK for Windows Mobile 5.0 to its lineup, allowing chip and device makers to add standards-based VoIP support to Windows Mobile devices. CompactSIP is built around a Pocket PC ARM emulator and supports a wide range of embedded environments, including pre-ported implementations for Linux, Nucleus, ThreadX, VxWorks, Windows CE and Windows Mobile. ■

AJAX in Mashups on the Rise, Survey Says

BY JEFF FEINMAN

A survey conducted by Evans Data found that 30 percent of AJAX developers say they will enable end-user mashup development within the year, but almost half have no intention of letting the masses get their paws on the technology.

Evans' 2007 AJAX Development Survey also shows that nearly 4 out of 5 developers are using AJAX for Web applications and 39 percent are using it for rich Internet applications (RIAs). John Andrews, CEO of Evans Data, explained that these figures reflected that the majority of developers using AJAX are Web developers.

But AJAX isn't just for the Web, according to the survey: Another 39 percent of developers reported that they were using it to create server-centric applications, which include CRM, database and ERP applications.

The use of AJAX has increased greatly in recent months, and more than one-quarter of the 400 participants in the survey said they expect to see AJAX usage grow by 50 percent next year.

The survey also noted that it is becoming increasingly possible for end users to create their own mashups by assembling information with application builders that act as glue. This functionality is enabled by programmers who build libraries of core technologies that form the basis of components structured around business processes, as well as developers that use APIs to build these components. The end user can then create many different types of mashups, including data mashups for widgets and Web services, process mashups or collaborative applications that support core business processes, or enterprise mashups that combine information from enterprise search engines, Web services, business intelligence engines and many other places.

CONTROL ISSUE

Currently, 8 percent of AJAX developers are facilitating mashup creation for end users, and 23 percent said they would do so within the year, according to the Evans Data survey. However, 48 percent of the AJAX developers that participated in the survey said they have no plans to ever allow end users to create their own mashups.

"Enterprises right now continue to be very reluctant to release that control," Andrews said when asked about the high number of developers who said they have no plans to allow end-user mashup creation. "The largest majority of people doing AJAX and mashups are solution providers, system integrators and consultants, so they want to do their own mashups. I do think that over time the number of developers that allow end users to create their own mashups is going to increase tremendously." ■

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Intel Ships Tuning Tools for Multicore Processors

BY ALEX HANDY

Intel released new versions of its analysis and profiling tools in early April that the company claims will help developers to program and optimize parallel-processed applications.

First among these is VTune Performance Analyzer 9.0, which Intel's marketing chief for the project admitted will mop up some of the sloppier aspects of its processor-based information gathering. Also updated at the same time were Intel's Thread Checker 3.1, Thread Profiler 3.1 and Threading Building Blocks 1.1, described as "a template library for parallelism" by Intel marketing director James Reinders.

Reinders has put the finishing touches on a book about Threading Building Blocks, his personal passion. "For people that are into C++ development and understand the Standard Template Library, this will feel just like a glove," he said.

Reinders noted that Threading Building Blocks 1.1 includes some automation and refinements that should help to make it easier to use, adding that the building blocks kit costs US$299, and includes free updates for one year.

'PRECISE EVENTS'

Intel also updated VTune Performance Analyzer to version 9.0 in April, adding support for Windows Vista. Thanks to new processor designs, it can more accurately discern where troubles are caused.

Reinders explained that previously, "[CPUs] didn't tell you exactly where something was happening in the system, because they called an interrupt and then they pushed the memory address onto the stack. That interrupt might be delayed, so [the push would] be one or two instructions after the access. This version actually captures the address and holds it till the interrupt happens. We call those 'precise events,'" he added. VTune costs $699, and includes free updates for one year.

Thread Checker, said Reinders, goes after bugs that are specific to parallel computing. "None of the profilers out there have any comprehension of this type of bug. Thread Checker is the only tool we know of that can dynamically link to a program and check for those bugs," he claimed.

Finally, Intel's Thread Profiler brings a higher-level view of performance tuning. Noted Reinders: "Thread Profiler shows you what's happening to the various threads of applications, regardless of how you built them. That's often enough for a developer to go in and tune an application, just knowing where the stalls are."

Intel Thread Profiler costs $399, while Thread Checker costs $999 for Windows and $499 for Linux; the Linux version offers fewer GUI elements, although it is functionally identical to the Windows version.

Both Thread Profiler and Thread Checker are now compatible with Windows Vista. ■

TIBCO Touts Predictive Business

BusinessEvents 2.0 helps users understand when events need attention

BY DAVID WORTHINGTON

Business events can seem as countless as grains of sand. But when simple events have been aggregated and correlated, you could end up with a heap. TIBCO Software's BusinessEvents 2.0, which became generally available on April 23, processes discreet events and applies business rules to help users understand when events are really situations that require attention.

The product's capacity to use rules effectively has matured since its initial release last year. According to TIBCO, BusinessEvents has new rule functionality to analyze and debug rules. It has also been given a higher capacity for events and resolves unbounded memory leaks.

The rule analyzer does what the name says: It analyzes rules and collects statistics on performance, evaluating and ranking each based on efficiency. It also displays dependencies, or how one rule or rule object relates to another. Its rule debugger performs impact analysis for rule changes and searches for abnormalities.

'HEAVY LISTENING'

What's more, BusinessEvents contains a new API to embed event processing into other applications. Regardless, the BusinessEvents infrastructure can "listen" to events that applications are generating, and in most cases, there is no need for applications to change, said Nelson Petracek, director of the advanced technologies group at TIBCO.

Petracek explained how businesses could become "predictive" by acting on the system's ability to identify threats and opportunities. This requires a partnership between business operations and IT professionals to build on the core rules, and respond faster to subtleties by capturing and leveraging events, he said.

"Ideally, IT should give the end user the ability to modify the system, without going back to them. Other BRMSes [Business Rule Management Systems] make inferences based on models; this product does heavy listening," said Alan Lundberg, senior product marketing manager for TIBCO. "It deals with the bulk to instrument and measure events, using real data instead of models."

"The emphasis for large organizations over the last five years has been a transition to becoming a more agile enterprise, capable of quickly responding to change and challenges within the marketplace," said Philip Howard, research director for data at Bloor Research. "The logical next step is to move from being reactive to proactive, by predicting those changes in advance." ▮

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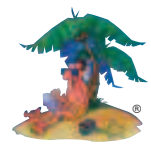

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JetBrains TeamCity 2.0 Goes Both Ways

Eclipse, Visual Studio plug-ins extend collaboration features

BY ALEX HANDY

JetBrains' TeamCity collaborative development environment is no longer restricted to users of that company's IntelliJ IDEA. With the release of TeamCity 2.0 in mid-April, the integrated team environment adds productivity plug-ins for both Eclipse and Microsoft Visual Studio to the package.

These plug-ins allow developers to observe the build system as it aggregates their check-ins, compares changes and displays the results of test batteries, all while still inside of their favorite IDE. And developers who've come to love IntelliJ IDEA also have something to cheer about: A new beta release of version 7.0 arrived in April as well.

TeamCity is a server-based Web application that can be used for continuous integration of code and testing, as well as build management and code analysis for maintenance, according to the company's Web site.

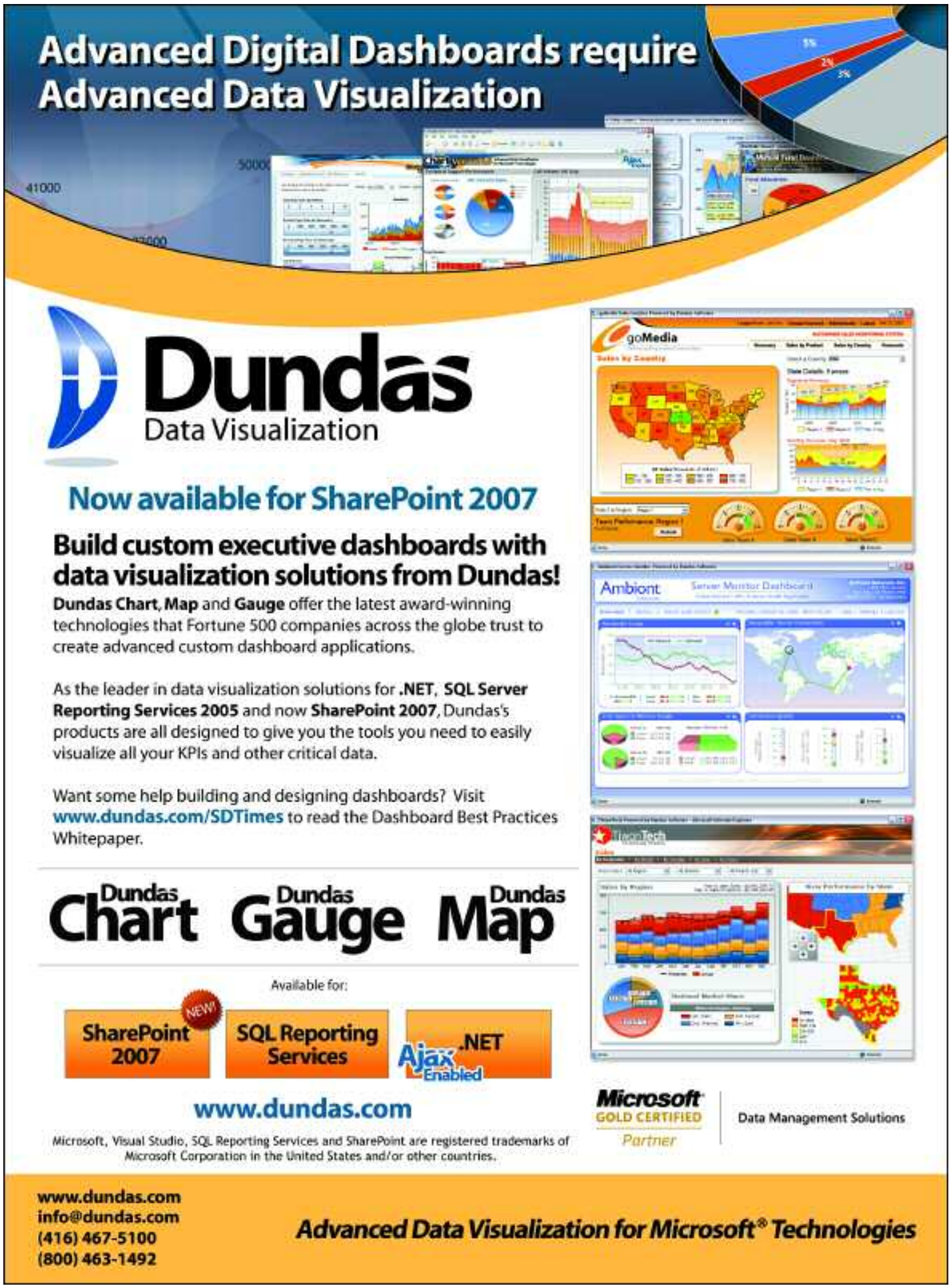
Previous versions of TeamCity integrated only with IntelliJ IDEA. This time around, Eclipse and Visual Studio users can take advantage of the various check-in tricks that TeamCity allows for, such as the ability to hold commits until after a build is complete, and the ability to take responsibility for broken builds without leaving the IDE.

In addition, users without IDE access can now view changes through the newly modified Web interface for TeamCity. Through that interface, developers can search for duplicate code and check up on the differences between versions and checked-in files. The TeamCity server has also been improved with new integration for the Ivy dependency manager, and support for dependent builds. Developers sick of dealing with security woes will also be happy to hear that TeamCity 2.0 supports LDAP.

IDEA 7.0 BETA AVAILABLE

The JetBrains team is also hard at work preparing its next version of the IntelliJ IDEA IDE. A new feature in this version is a significant speed-up of the underlying engine to take advantage of multiple cores and CPUs, making XML and JSP editing faster, according to the company. Some operations can even be run in the background, allowing developers to check their e-mail or browse the Web while that giant refactoring job is running.

IntelliJ IDEA 7.0 will also support the Spring application framework, the Hibernate mapping framework, and new integrations with IBM's ClearCase. The new version of IntelliJ IDEA should be out before the end of the year, and the first beta of 7.0 is available for developers to download at www.jetbrains.com/idea/nextversion. It is free to download for Linux, Mac OS X and Windows. ▮



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YOU MEAN THE ***ENTIRE*** PROJECT WAS SITTING ON YOUR HARD DRIVE AND NOWHERE ELSE?

AH... WE THINK THAT EVERY TIME YOU VAPORIZE ONE OF US WITH THOSE GLOVES... UH... NEARBY HARD DRIVES GET WIPED BY... AH... UM...

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PLASMA LEAKAGE, HUH? QUICK THINKING.

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Debian 4.0 Etches Out Security Role

BY ALEX HANDY

It's been almost two years since the Debian community began working on the "Etch" version of its Linux distribution, but after 21 months of work, Debian 4.0 was released on April 8. The operating system focuses on command-line-based ease of use, security and a rigid commitment to proper open source licensing.

The Debian community has long considered its Linux distribution to be one of the most secure, but with the release of version 4.0, additional security features have been added to bolster the system's capabilities. Debian version 4.0 now includes support for encrypted hard drive partitions out of the box, eliminating the need to install multiple files before encrypting a disk.

Debian's Apt-get update manager has received a security overhaul as well. The program allows users to automatically grab programs from repositories around the world, and is the primary method for installing software on the operating system. This time around, Debian's flagship tool will verify the integrity of software downloaded from repository mirrors. In addition, new versions of software downloaded via Apt-get will come down as patches for existing software, rather than as entirely new, buildable source trees. The repositories used by the Debian project have been compromised in the past, and many of the changes in Debian 4.0 are intended to minimize the extent to which users can be harmed by such an event in the future.

'COMMITMENT TO EXCELLENCE'

Mark Shuttleworth is CEO of Canonical, the company that produces Ubuntu Linux. Ubuntu is based largely on the work of the Debian community, and Shuttleworth said that he's extremely impressed with the Debian 4.0 release. He also defended the length of the development process for this release.

"The one thing folks need to remember when you build an institution, is that you have to decide what it's going to be really good at," said Shuttleworth of the Debian community. "Debian is extremely good at certain things. It's an extremely open environment. [The community] believes in taking time to find the right way forward. I think the great thing about Debian is that [the community] takes its time to figure out what the right technical solution is. They have that commitment to technical excellence. If you try to optimize an institution for multiple things, you'll get confused. I'm quite comfortable with the Debian we know and love."

Canonical does not rely on major Debian releases for the Ubuntu Linux code, and thus is not beholden to the lengthy release cycles, said Shuttleworth. "We don't rely on the releases of Debian so much [as] on collaboration with the community. What's important for us is the general health of the Debian community, and I think Etch is phenomenal." ▮

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WS-I Profiles Cut Through Standards Spaghetti

BY DAVID WORTHINGTON

The Web Services Interoperability Organization (WS-I) made a bevy of announcements in an April 3 Webcast with the press, leading with the completion of the WS-I Basic Security Profile 1.0. A complementary set of Web services profiles is targeted for completion in the second half of 2007.

Basic Security Profile (BSP) 1.0 is built on the work of WS-I's Basic Profile 1.1. It provides guidelines for developers to build secure, interoperable Web services and basic information on how to use specifications to support their own cases. It addresses SOAP messaging and transport security.

"An interoperability profile offers valuable guidance to product implementers and application developers regarding the interpretation of a specification," said Anne Thomas Manes, research director and vice president at the Burton Group. "A specification typically supports a broad set of requirements, and offers a variety of options and approaches, but these options can lead to misinterpretation and result in interoperability challenges. An interoperability profile constrains the options and makes communication easier."

The WS-I board approved BSP 1.0 after its five members—IBM, Microsoft, Novell, Oracle and SAP—demonstrated sufficient interoperability. The first revision will add WS-Security 1.1 and fix any errors that are discovered before it is published later this year.

MORE TO COME

WS-I also discussed the next two revisions to the Basic Profile, and plans for another security profile, all due by year's end. Basic Profile 1.2 adds WS-Addressing, MTOM/XOP and SOAP 1.1 binding for MTOM, the W3C's Message Transmission Optimization Mechanism. WS-Addressing defines a standard mechanism for identifying and exchanging Web services messages between endpoints.

Basic Profile 2.0 will update Basic Profile 1.2 by swapping out SOAP 1.1 for SOAP 1.2 and WSDL 1.1 binding for SOAP 1.2. The W3C recommendation describes SOAP 1.2 as being cleaner, with clear processing and extensibility models, more integrated with XML standards and Web architecture, more versatile with a binding framework that provides protocol independence, and faster than its predecessor.

Reliable Secure Profile 1.0 adds WS-ReliableMessaging and WS-SecureConversation. WS-I designed the profile to deal with ensuring "secure, reliable messaging capabilities for Web services," according to the working group's Web site.

"The importance of the new Basic Profiles and Reliable Secure Profile is that they add the ability for Web services to be asynchronous versus synchronous-only, while ensuring reliability," said Michael Bechauf, chairman and president of WS-I. ■

Launchpad Coordinates Open Source Development

Ubuntu team releases collaborative site to aggregate bugs, blueprints for large projects

BY ALEX HANDY

When the Ubuntu project began, the team behind the Linux distribution realized that it would need to communicate and coordinate with many other open source teams, keeping track of changes in Firefox, Gnome, GCC and any of the hundreds of other bits and pieces that make up a Linux distribution. To solve the problem, the Ubuntu team began using an internal tool a year ago that it called Launchpad. That tool is now publicly available at Launchpad.net, after it was officially unveiled in beta form in early April.

Mark Shuttleworth is CEO of Canonical, the company behind Ubuntu Linux, and he argued that Ubuntu's very nature necessitated the design of Launchpad: "A very significant majority of packages in Ubuntu are inherited from Debian, [other] upstream developers and increasingly from other distributions as well. For us, we said fairly early on that our efficiency in collaborating with other projects was going to be a very key thing for us." Shuttleworth added, "Our infrastructure for tracking bugs and [other items] wasn't up to what we wanted. We started writing some of our own infrastructure for planning, tracking user requests and so on. Launchpad is that infrastructure, made available for Ubuntu and for other projects as well."

Launchpad takes its cue from other project management sites, such as Sourceforge.net and Google Code. Shuttleworth categorized it as being the Wikipedia for open source projects. "The thing that it does, better than anything else out there, is help build a conversation that spans multiple communities," he said. "Say you've got a bug in Firefox. You'd hope it's also in Mozilla's bug tracker, but it could also be in Red Hat's, and in Ubuntu's. Launchpad tracks those across other systems. Launchpad automatically aggregates the status of all of those. You'll be notified of changes in the status everywhere."

Mark Shuttleworth, CEO of the company behind Ubuntu Linux, characterizes Launchpad as being the Wikipedia for project tracking: Users add information to each project, whether that information is meta, direct or just made up.

The site can track more than just bugs: Launchpad can help track a project from creation to completion, through blueprints, code and even localization, claimed Shuttleworth. "It works on the same basis as a wiki. Anyone can come and add information. It understands a couple of things about context. It understands people and teams, such that, 'This bug is assigned to that team.' It also understands the structure of projects, so it understands milestones," he noted. "We recognized that we don't want everyone to switch to using Launchpad, so it's designed to either be used by projects or to be linked to by them."

Shuttleworth said that many projects have already jumped on board and built pages inside Launchpad for their work. The site is particularly useful to the people that build the glue between software, said Shuttleworth. "It's good for projects that are middleware. Developers who find bugs in shared libraries are more often than not the developers who are using them, not the developers developing [those libraries]. In many cases, the bug shows up first as a symptom of a problem in their application. One group might say, 'It's not us' and reject the bug. The conversation is recorded, so it becomes easier over time to get the right set of eyeballs on the problem." ▮

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RadView Cruises With Free WebLoad

BY JEFF FEINMAN

RadView Software, a provider of open source performance-testing tools for Web applications, announced on April 11 the release of WebLoad Open Source, a free version of the company's flagship product.

The new version of WebLoad has a JavaScript-based language, which allows a short learning curve for developers, according to Rami Goraly, RadView's vice president of marketing. The new "Cruise Control" function allows testers to set usage parameters and specify performance goals. For example, if a developer wanted to have an application server's response time exceed no more than three seconds, Cruise Control can configure the test against that goal. In addition, Goraly said that the offering has support for rich Internet applications (RIAs) and applications based on AJAX, which he said can be very difficult to test due to their complexity. Using WebLoad, developers can record an AJAX-based application and build an AJAX script.

"Enterprises are starting to adopt RIAs and AJAX, and they say that one of the biggest barriers to the adoption of these [technologies] is the fact that it's very difficult to test their performance," Goraly said. "So, we feel we're leading the market for these specific kinds of performance testing."

In addition to WebLoad Open Source, RadView announced the for-pay WebLoad Professional, which includes the ability to generate a distributed load. ▮

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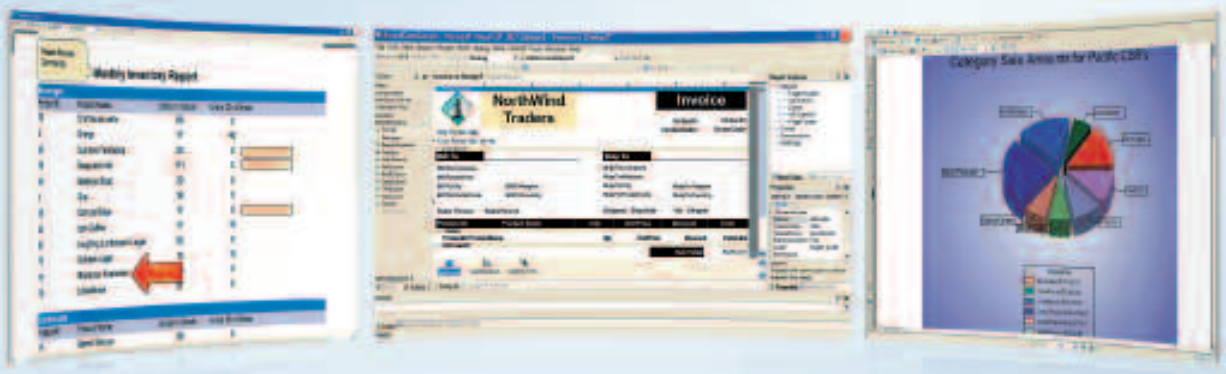

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HALEY RELOADS RULES SUITE FOR TEAMWORK

BY DAVID WORTHINGTON

Unlike Halley's Comet, upgrades to Haley Systems' Business Rules Suite are more than a once-in-a-lifetime event. Business Rules Suite 6.0, released April 9, has been adapted to make writing business rules a simpler and more collaborative process.

The linchpin is the Haley Collaborative Server. It allows users to author and edit business rules over the Internet using two new browser-based clients, or with Haley Tabular Rules client for Microsoft Excel.

The browser-based clients are DHTML versions of the Modules and Statement, and DHTML Tabular Rules tabs from Haley Authority. Tabular Rules is a spreadsheet-like interface used for modeling and for verifying and testing rules. It is a standard template for expressing rules that uses rows and columns to specify conditions and rules, explained Matthew Sevin, chief knowledge officer at Haley.

To simplify its rule-authoring environment, Haley has bundled in a new Vocabulary Acquisition Wizard and the Dictionary Web Service. The Vocabulary Acquisition Wizard facilitates the definition of vocabulary and ontology, while the Dictionary Web Service—which Haley hosts—retrieves business language that can be inserted while creating a new concept. ▮

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VersionOne Offers a New Agile Taskmaster

Update adds virtual taskboard for organizing projects

BY DAVID RUBINSTEIN

Planning, coding and testing are key elements of any software development project, but this is especially true when creating applications under iterative or agile processes. Without well-conceived long-term and daily plans, producing the code promised for that day, and testing it to make sure it's functional and meets requirements, iterative or agile development simply won't work.

To help facilitate those steps, agile project management software provider VersionOne has updated its platform with release 7.1 of V1: Agile Enterprise.

According to company founder Robert Holler, new integrations with the source code management tool Subversion and the test framework FitNesse further enterprise-enable the software, as team members now can see any changes or corrections that have been made to a feature. The FitNesse integration provides team members with test result information during each iteration of the software. "In prior releases, we had the ability to send high-level test information to the tool for trending," Holler said. "Now, the tight integration between Subversion change sets and our features-and-defects [reporting] creates a compelling story."

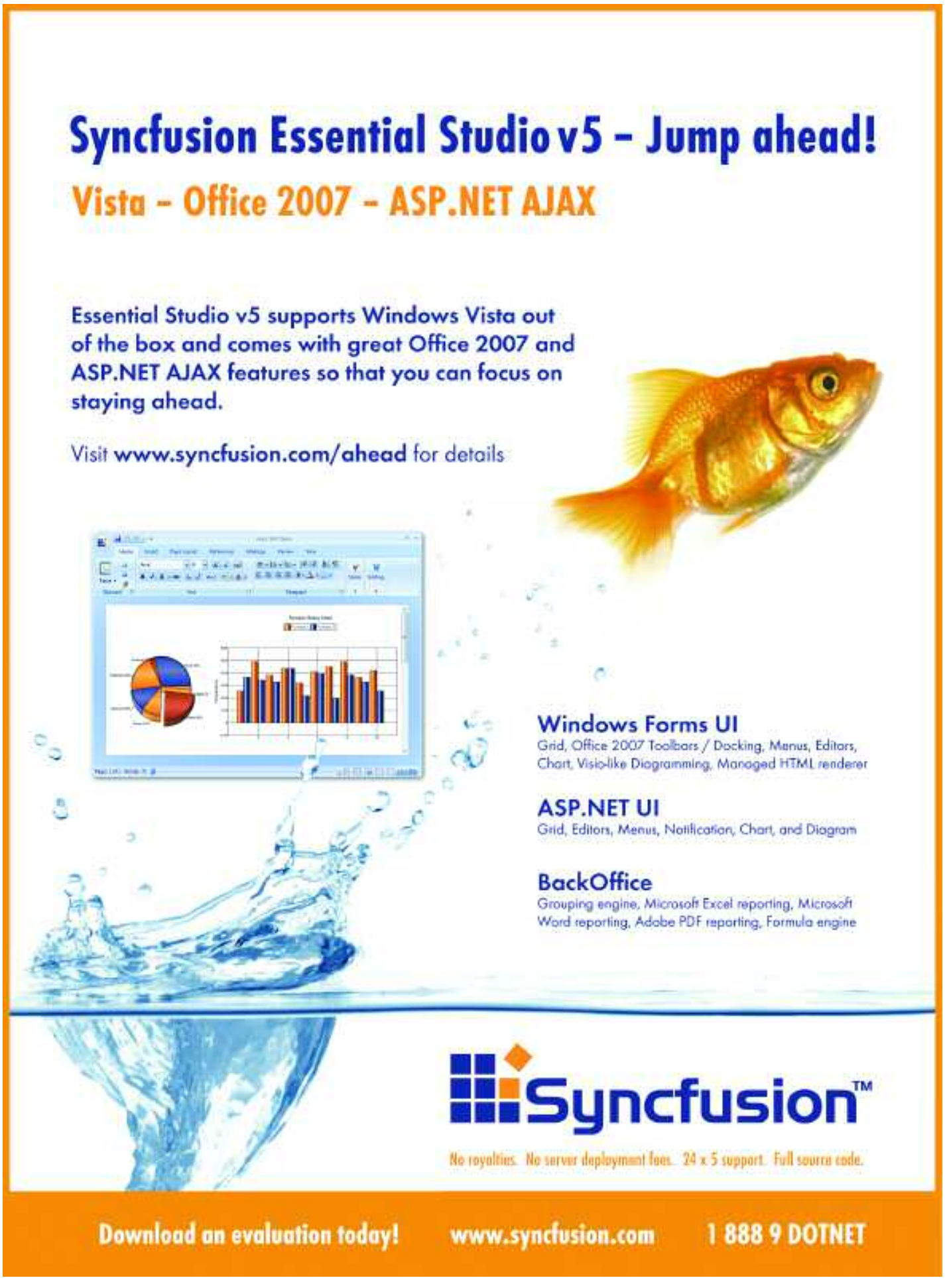
Holler said the company is releasing the integrations as open source; a request tool gives customers the ability to submit their requests through the V1: Agile API.

Other features include a recent changes list, when team members can see recent changes, and AJAX-based pop-ups that give a quick description of the item selected.

Holler, though, seemed most excited about the addition of a virtual taskboard to the software. "We use the concept of a taskboard internally," he said, "progressing the task cards through statuses and states. Now it's manifested electronically in our platform."

According to Holler, the taskboard gives distributed teams the ability to report in and work together. Task status can be changed in a drag-and-drop way, and when populated with real-time burndown and cumulative flow charts, it can serve as a dashboard during "standup meetings," which are important in iterative and agile development shops. "This [virtual taskboard] gets us out of the static project management arena and offers visualization across the enterprise," Holler said.

VersionOne offers its platform in both Enterprise and Community editions. The Community edition is free for a five-seat license, aimed at small development teams, and is not supported. The Enterprise edition is available in either a US$30 per user per month subscription or a $500 license, and support and maintenance are available at an extra cost. ▮



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How to Avoid Software Black Holes

Scott Rosenberg discusses 'Chandler' and how to successfully develop software

BY DAVID WORTHINGTON

Some people dream in color; others dream in black and white. And then there are those among us who dream in code. Salon.com founder Scott Rosenberg spent three years trailing an assemblage of some of the world's most legendary programmers, led by Mitch Kapor, as they attempted to revolutionize how we manage personal information.

Kapor's Open Source Applications Foundation (OSAF) led the charge to create an open source alternative to Microsoft Outlook, which it named Chandler, after Kapor's dog. With millions of dollars of donors' and Kapor's money spent and more than 4,732 bugs filed, Chandler remains unfinished. SD Times sat down with Rosenberg to discuss the topics raised in his book "Dreaming in Code" and the lessons he took away from his experience.

SD Times: Were there too many cooks in the kitchen at OSAF? In other words, did engineers have too much say?

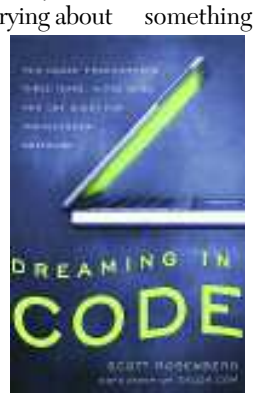
Scott Rosenberg: There are a lot of different ways of doing a diagnosis of the problems at Chandler. There are people [who] have read the book and said, "Well, the problem is that it is a classic visionary problem." Kapor had the vision and the resources to indulge himself; there were fewer constraints.

I don't think that [having too many cooks in the kitchen] is the conclusion I have drawn. You have a project unlike other open source projects, that was being led by someone who is not primarily a programmer, whereas open source projects are much more typically driven by programmers.

How can engineers and business people communicate successfully with one another?

[Miscommunication is] the primary interface of failure. On the side of the engineers, or programmers, you have this constant hunger for specificity, for detail and finality. That is what the engineer wants, because if things are specific enough, engineers can go off and build them. If they are detailed enough, the engineers don't always have to be filling in the blanks, and if they are final enough, they don't have to always be worrying about constant changes.

That is what they want. The problem is that I have yet to encounter any software project that came anywhere close to fulfilling any of those conditions. It's just not the world we live in. And so the question really becomes, given those conditions are just not achievable, how do we communicate in that imperfect environment?



The answers that you'll find [methodologies with specific prescriptions] at the root of most of them are a handful of basic principles that are not even specific to the field of software. They are the kinds of things you would encounter in any advice for people trying to make a family or public organization work better. Those principles are to communicate frequently, and listen to what the other person is telling you. Engineers are used to precise language. Sometimes an engineer will hear something a certain way, and then go and do something that they think they heard. A week later, the businessperson says, "I did not mean that at all!" and a week's work is lost. That might have been avoided if they spoke frequently.

Are there any pitfalls to avoid?

It is also important to be careful with terminology and vocabulary. Something could mean one thing to a programmer, and [another] thing entirely different to a nonprogrammer or business user. There can be big black holes of disaster awaiting you there, if you are not careful. It is a hugely important undertaking that should be done very carefully.

Working from prototypes and dealing with things that are partially functioning, so that business people can have something to go on, provides more clarity [than an abstract product]. The Chandler team spent too much time on the abstract. Getting something to people sooner, rather than later, provides better opportunities for course correction.

Is Linus Torvalds correct in his assessment that you should never plan to do a big project...that you should start small and, with luck, the project will grow?

It is an amazing observation. There is an old proverb that a journey of 1,000 miles begins with a single step. A 1,000 mile journey in software can be so daunting because of the amount of complexity involved. If you try to get your head around all of that, you will be discouraged and have a hard time getting started.

Keep your mind on a small and achievable goal. It is a variation on the incremental principle [of software development] that turns up in various ways like agile [processes] and Extreme Programming. It's a principle that applies to any ambitious creative act. The World Wide Web was built on what programmers thought was crude and bad technology. But one quality made it right: It was simple and easy for people to start using. I place a lot of faith in simplicity.

What lessons can open source developers take away from Chandler?

Chandler's place in open source is kind of unique, because it is open source in that code is available, but it has been very atypical in being a product that has been worked on by a team functioning like a startup. Most successful OS projects are really, truly distributed volunteer networks.

The problems [Chandler] set out to solve would be good problems to solve. The big lesson, that the participants in Chandler would not argue with, is that the lesson is to put out a small piece of a product that is useful enough to inspire people. Do it earlier, rather than later. Chandler spent a long time doing infrastructure work, and at some point realized that the direction was wrong.

They refocused around the calendar, and if they had done that at the beginning, they would be at a different place now.

In your opinion, would Chandler have succeeded if it had been developed as commercial software?

Well, the difference there is that the story would have been different if they had had a tight budget and were a more traditional startup. Constraints like budgets serve as a goad to get things done. Certainly, one of the factors in how long Chandler has taken is the open-ended nature of Kapor's commitment. He has plenty of money and wants to see it happen.

He might have certain limits, but [the constraints] are certainly not anywhere as near restrictive as a more common business decision. That, to me, is more the issue than the difference between commercial and open source licensing. If Chandler has some greater limits on time and money, that may have helped focus their work faster, for sure. It is the same case, whether it was open source or commercial. ▮

Tech-Ed 2007: Summer School For Developers

BY DAVID WORTHINGTON

On June 4, it's back to school for developers, when 12,000 IT professionals are expected to converge on Orlando, Fla., for this year's Tech-Ed conference. Windows Vista, Exchange Server 2007, ASP.NET AJAX, Office 2007 and the upcoming Longhorn Server are the main topics of the conference, which runs through June 8.

Bob Muglia, Microsoft's senior vice president of the Server and Tools business unit, will kick off the festivities on Monday with a keynote address. Muglia is expected to discuss the reasons why Microsoft believes that IT is evolving into an asset that is "fueling growth and driving innovation"—and should not be thought of as just another organizational cost center.

Tech-Ed 2007's curriculum consists of 14 core technical tracks with more than 440 breakout sessions and more than a dozen preconference seminars.

Microsoft product team members and industry experts will be in attendance. There are slated to be more than 150 hands-on labs at 800 different stations, to supplement instructor-led labs and seminars. ▮

Microsoft Tech·Ed 2007

CONFERENCE:
June 4–8
Orange County Convention Center, Orlando, Fla.

TECHNICAL LEARNING CENTER:
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Tuesday, 9:00 am–6:00 pm
Wednesday, 9:00 am–7:00 pm
Thursday, 9:00 am–6:00 pm
Friday, 9:00 am–4:00 pm

HANDS-ON LABS:
Monday, 10:00 am–9:00 pm
Tuesday, 7:00 am–10:00 pm
Wednesday, 7:00 am–10:00 pm
Thursday, 7:00 am–5:45 pm
Friday, 7:00 am–4:00 pm

KEYNOTE:
Monday, 8:30 am–10:00 am
Bob Muglia, SVP, Microsoft Server and Tools business unit

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Skyway Lights Up Its Visual Workspace

BY DAVID WORTHINGTON

Skyway Software has lit up its flagship product for developing, deploying and maintaining SOA applications throughout the application life cycle, with Visual Workspace 5.0, available April 23. The new features in this release of Visual Workspace center on improving product development and deployment processes.

On the development side, Visual Workspace 5.0 adds integration with Adobe Systems' Dreamweaver as an alternate HTML editor for the design suite, enhanced product documentation, transaction and exception handling, AJAX support in Web UI controls and model write-protection, in addition to various usability enhancements.

A dependencies view has been added to Visual Workspace's interface, as well as a desktop search and touch-graph control enhancements. This release also adds the Chainsaw log viewer, which works with the Java-based log4j utility, developed by the Apache Foundation.

New "scaffolding templates" are provided to ease the deployment of Visual Workspace UI controls, including tabs and data grids. Another change that affects the deployment cycle is the addition of "late binding" of external data sources, making it possible for developers to proceed toward delivery without considering the data source or production environment until deployment time. Workspace generates the underlying execution code after the developer selects a database and application server, said Sean Walsh, Skyway's president and chief executive officer. ▮

Watchfire Unveils Community Site, Updates AppScan

BY JEFF FEINMAN

If the newest version of its Web application security solution, AppScan 7.5, wasn't enough, Watchfire has introduced a community Web site to encourage the creation of AppScan extensions.

The new AppScan Extensions Framework includes an SDK for AppScan extensions. Developers can also download extensions created by AppScan that add the ability to display AppScan reports in Microsoft Word, a Microsoft Visual Studio Team System defect export function, and the ability to receive e-mail notifications during a scan.

Also new is Pyscan, an integration of the Python scripting language and AppScan that uses Web application scanning functions to mix automated and manual efforts, such as customizing a scan to a specific audit. Watchfire officials said that Pyscan can automate more testing tasks, improve test accuracy and save testing time.

"Watchfire's Extensions community and Web site is all about innovation," said Michael Weider, founder and CTO of Watchfire. "Our customers can now create and share their own extensions, and collaborate together on new ways to leverage the new open flexibility of AppScan." ▮

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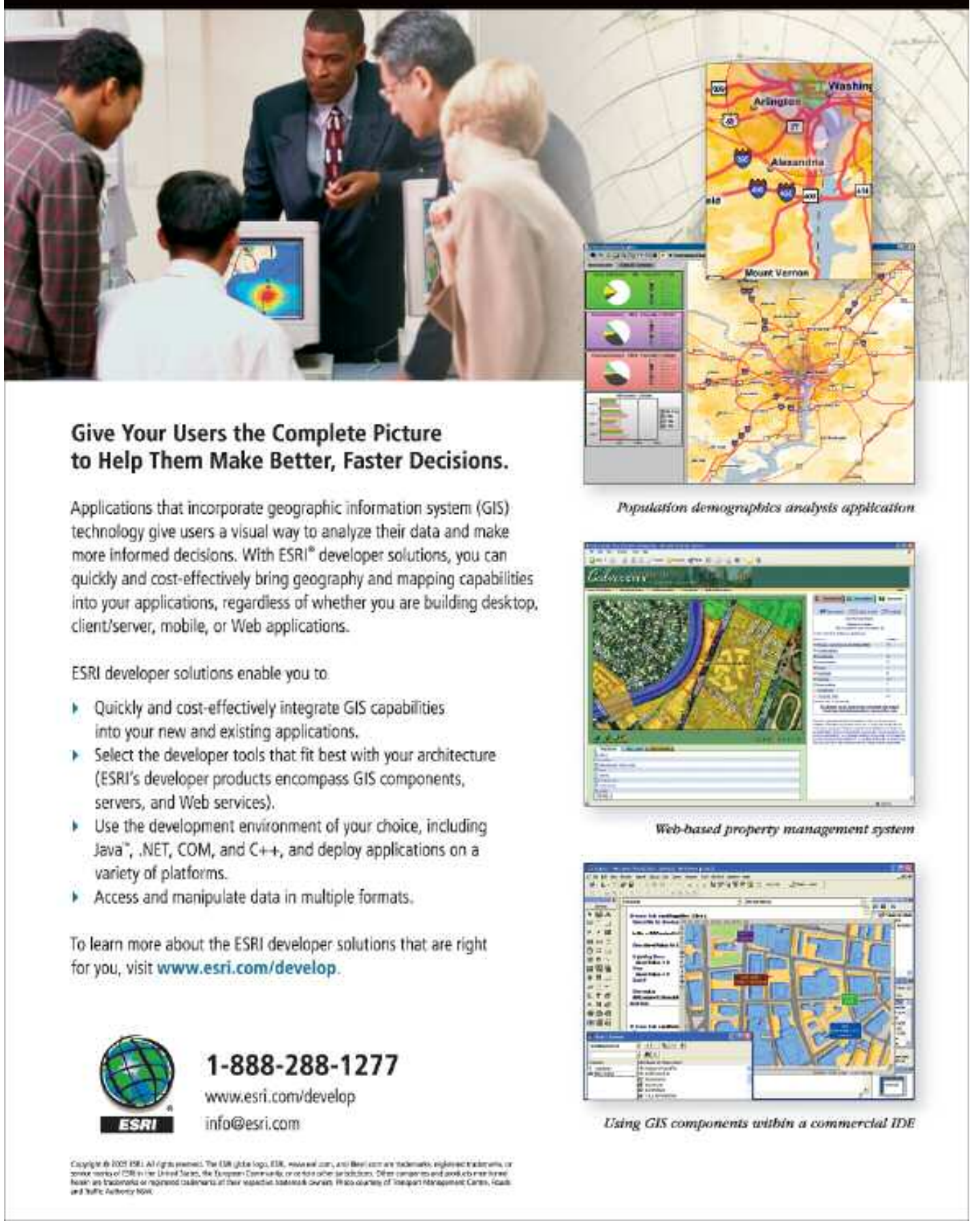

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Web 2.0: When Software

◂ continued from page 1

tomer credit reports, or the current location of a cargo container in the South China Sea and its projected arrival date at a manufacturing facility.

IT managers must learn how to give as well as take information in this new, shareable environment, while still protecting their company's interests. Innovative companies will take advantage of these new resources and reinvent themselves as unstoppable forces in their markets. Those who don't take advantage of this revolution will become quickly outdated, perhaps out of business. Now is the time to begin understanding the issues you will face, and how to open the company gates to nurture this IT renaissance while still keeping the barbarians at bay.

The movement and direction of this technology convergence are clear. Take, for instance, the rapid rise of software as a service (SaaS). Based upon current trends, IDC predicts a compound growth rate of 20 percent per year for SaaS, set against the overall software market, which is growing only at around 6 percent per year. This leaves IDC in no doubt that there is a fundamental shift toward SaaS as a delivery mechanism, and its use within the notion of Web 2.0, and the convergence of service-oriented architecture (SOA), Web 2.0 and SaaS (see box).

At the same time, enterprises are turning to SOAs to provide a platform for the use of SaaS-delivered services, and links to the emerging Web, even through the ad hoc notion of mashups. The movement toward SOA, like SaaS, is well documented, and is being driven faster by the emerging service-oriented resources on the Web.

According to Evans Data's latest Web services development survey, "This year the percentage of functioning Service-Oriented Architectures has almost doubled. Web Services are now also experiencing more comprehensive implementation with 30% of respondents using more than 20 services in the next year, a 58% increase from today."

Moreover, there is a movement to leverage these pervasive services within the enterprise, through mashups, providing on-demand access to business processes and information, as needed, and at bargain rates.

What's important to remember is that there is a huge resource being created on the Web. Take advantage of this resource or it will devastate your enterprise, much like those who ignored the rise of the Web in the early 1990s soon found themselves playing catch-up. This is a similar mega-trend, and the time is now to prepare your business to fit into this new paradigm, which is actually much more complex, but provides 10 times the ROI of the traditional Web.

STEPS TO CHANGE

There are, however, a few things that need to occur in order for your organization to take advantage of this convergence. It is critical to deal with the culture, prepare the infrastructure and prepare the master plan for adoption of the new technologies.

"Deal with the culture" refers to the fact that most of those who control IT within organizations have not accepted the fact that the Web will morph into something very different from its current state, and now is the time to set expectations and educate. It has to be an acceptable reality that many of the applications, services and processes that drive the business will exist outside of the firewall, and some of the applications and services that currently drive the company may be exposed to others on the Internet as well. Today this outside-in, and inside-out architecture is a huge shift in thinking for many IT staffers, but acceptance will come by educating IT as to the benefits to the company, customers and employees.

"Prepare the infrastructure" means

BEHIND THE CONVERGENCE

What's causing the shift shift toward the convergence of SOA, Web 2.0 and SaaS? There are five primary drivers:

1. Purchasers believe that the current cost of traditional enterprise software is disproportionate to the value that it creates.
2. In these budget-conscious times, there is intense pressure to reduce the cost of acquisition and maintenance of software solutions (the ongoing support and maintenance of solutions can often be four times the original capital cost).
3. Organizations are striving to reduce risk, and want a far more tangible relationship between software's benefit and its cost.
4. The drive for reduced risk demands a much greater predictability of the running costs of the organization's software solutions.
5. The value of solutions is no longer determined by the functionality available (in fact, most organizations are using only a small subset of the functions available in their software products), but by the feelings and experience of the users in the way that they use and interact with the solution.

–David S. Linthicum

Technologies Collide

that once the culture accepts the change, the existing systems and architecture must also change so they can safely consume and manage outside-in services and processes, as well as expose services and processes as needed. In essence, this is a matter of a systemic change to SOA, and to all of the projects and processes that need to occur to make that happen.

This means that a well-thought-out plan of attack must be created to ensure that all data, services and processes are inventoried and analyzed. Moreover, security needs to be considered, along with governance of services and processes, inside or outside of the company. Finally, a strategic technology solution needs to be created, providing all aspects of the SOA solution, considering the influence of the forthcoming outside-in services.

"Prepare the master plan" refers to the master architecture, building up for your SOA to target solutions that may exist inside or outside of the enterprise, including key SaaS players for providing processes, services, solutions and information. This also includes access to Web services marketplaces, such as Google, Microsoft and Yahoo and the cataloging of all services of value in the central governance repository for allocation to critical business systems. In addition, this includes defining target processes that will drive the business going forward, leveraging the services, and the approach to agility, or the ability to change the processes quickly as business requirements change.

WILL YOU BE READY?

Truth be told, nobody can be completely ready for something like this. Indeed, larger more cumbersome organizations won't be able to change until it's just too painful not to. Such was the case with the rise of the first-generation Web in the early 1990s—most were pushing back on it, not reacting to its potential. That is, until their customers did, and many organizations today are still behind and suffering for it.

We are moving into a world where the lines are blurring between where our enterprise systems end and the Internet begins. In just a few years you could find yourself driving user interfaces, services and information for critical business systems from thousands of sources, most not within the firewall, using your internal infrastructure as the final controller to align the outside services with the correct business processes.

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Software AG's SOA Play

◄ continued from page 1

the combination of Software AG and WebMethods is now second only to IBM in terms of both traditional integration and SOA capabilities."

Bloomberg continued, "This is a market share play and a SOA play. Software AG gets a much stronger North American presence, and they can now leave the likes of TIBCO and Oracle in their dust."

ZapThink analyst Ron Schmelzer questioned whether a new "mega-global" brand is emerging. To that effect, Software AG also announced plans to more than double its yearly revenue to $1.3 billion.

The acquisition rounds out Software AG's product portfolio with new capabilities in the integration process and governance areas. It also provides Software AG with repository metadata management capabilities from WebMethods' Infravio.

WebMethods' heritage is as an enterprise application integration (EAI) vendor. Neil Ward-Dutton, research director at Macehiter Ward-Dutton, a research group, said that the EAI market changed shape as specialist vendors moved beyond Global 2000 companies and had to convince the mass market of enterprises to invest in integration tools.

He continued, "At the same time, Microsoft happened—attacking this mass market with BizTalk and undercutting the expensive providers of complex tool sets like WebMethods."

Ward-Dutton reasoned that SOA provided EAI specialists with the secret sauce that they needed to make propositions to the mass market through leveraging standards-based middleware and mainstream software development approaches. "Also it had the virtue of locking Microsoft out of customer conversations for a while, because [Microsoft] failed (until recently) to get on the SOA bandwagon," he said.

Software AG is Europe's largest systems software and SOA provider. Its products include the Crossvision SOA integration suite, the Natural 2006 programming language, and the Adabas database management system, and other integration and legacy modernization tools.

According to the companies, the transaction is expected to close during the second quarter of 2007, after it meets customary closing conditions. The board of directors of WebMethods approved the transaction and recommended that shareholders accept the offer valued at $9.15 per share. ▮

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Sun, Harmony Sing Different Tunes on Compatibility

◂ continued from page 1

lectual property that must be infringed in order to implement the JSR 176 specification.

In Sun's JCK, written more than a year before the Harmony project even began, the company specifically defines acceptable usage scenarios in a way that the Apache Foundation finds unacceptable. And Magnusson claimed Sun hasn't addressed Apache's concerns since the foundation first brought them to Sun's attention back in August of last year.

"Sun defines 'field of use' as general purpose use on servers, desktops and laptops," Magnusson told SD Times. "Any use that's outside of that scope does not receive the applicable intellectual property. We have been told by Sun that [the area] outside of this 'field of use' includes natural and commonplace things to do, like use the software in an airport kiosk. That means that software that was tested by us on Ubuntu Linux and standard hardware [is covered], but if someone picks up the machine and puts it inside an x-ray machine [it is not]. Our argument is that the specification lead cannot define usable spaces, period."

Sun doesn't seem to be ready to engage with the Apache Foundation just yet. While it has negotiated fairly with the group in the past, Sun has declined to comment since this new open letter was sent. The company has published a number of blog postings about the letter, and one anonymous source inside the company did accuse the Apache Foundation of trying to generate attention for itself in advance of May's JavaOne conference. But the official word at Sun, for now, is that there is no official word, and there isn't likely to be one anytime before JavaOne.

This is not the first time the two sides have failed to see eye-to-eye over compatibility issues. Sun and the Apache Foundation went to the mat in May 2002 over an issue very similar to the current flap. In that year, the Apache was able to convince Sun to push through changes to how the JCP licensed its Test Compatibility Kits (TCKs). Then, the issue was the costs associated with the licensing fees Sun and other spec leads charged for their TCKs. This time, although a TCK is at the heart of the issue, the real onus is on Sun, and not just the JCP, as Sun is the lead on JSR 176, the specification in question.

IP DISCUSSION NEEDED

In the end, it all comes back to patents and intellectual property. Magnusson worries that the licensing definitions of the JCK could place some Harmony users in jeopardy. That's because, while the JCK grants amnesty for IP and patents infringed in implementations, Sun's "field of use" clause restricts the scope of that amnesty. And that's one reason that attorney Karen F. Copenhaver expects this open letter to spark new developments in the open source community's approach to intellectual property.

Copenhaver, a partner at the law firm of Choate, Hall & Stewart, said the problem of software patents and intellectual property is becoming more relevant to developers with each passing day. "I would say that there will be a very productive period in the open source communities, in being very creative about developing means of procuring the rights that are necessary for the users of open source to enjoy the benefits of the software, and that these kinds of discussions are an important part of reaching community consensus on how to deal with those issues going forward." ▮

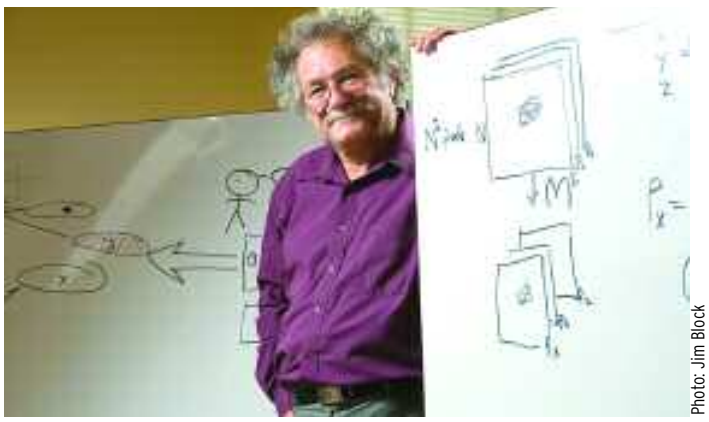

Photo: Jim Block

The program will train software businesspeople, CMU's Martin Griss says.

Masters of Software

◂ continued from page 1

MBA, since it doesn't have the classic foundation in finance and other hard-core business fundamentals, but it's focused on business. In class, said Jim Morris, professor of computer science and dean at Carnegie Mellon West, it's all about software engineering in a business context.

The Masters of Software Management course is also less expensive than an MBA program. Tuition runs about US$60,000 for the two-year, six-semester program. By contrast, Dimeff said, a typical MBA program from a top university can cost between $70,000 and $120,000. CMU's Masters of Software Engineering program costs $55,000, she added. Fellowships and financial aid are available.

The course is entirely project-based, explained Martin Griss, associate dean for the program. Students, who meet weekly, team up in groups to simulate working for software companies, making reports for executive committees, making recommendations on methodologies, researching outsourcing programs, making business plans, handling patents and inventions. "You can be excellent in software, but for this program you have to be more. You have to be excellent as a software businessperson," he said.

"There's a tremendous need for people who can face this type of organizational challenge," Morris added. "It's perfect for career acceleration." CMU hopes for about 50 students to take part in the first year's program, with about one-third coming from outside the Bay Area.

The Masters of Software Management program director is Tony Wasserman, formerly vice president of middleware maker Bluestone Software, and then director of the Mobile Middleware Labs for Hewlett-Packard.

The Masters of Software Management program is taking applications through June 1. ▮

A PATCHED APPROACH TO SECURITY

◂ continued from page 3

Miller, Microsoft cooperates with law enforcement worldwide to track down malicious users and activity that it believes threatens its customers.

IS IT ALL WORKING?

Gary McGraw, CTO of the security firm Cigital, remarked that the biggest issue Microsoft faces is that of backward compatibility. McGraw compared Microsoft to an aircraft carrier. "They can try to do security-by-design and do a pretty good job, but they have all of this momentum from so many years that will make it a challenge for them," he said.

McGraw continued his assessment, "They are doing much more than paying lip service, as they had done for years. They changed their software development process to introduce security touch points, like performing code reviews and risk analysis, and have trained all their developers on security. They are very active trying to do things, but it just turns out to be hard, especially with all of that momentum."

Illuminata founder and principal IT adviser Jonathan Eunice was more critical of Microsoft. "The major bugs and exposures keep being discovered and exploited at a very rapid pace—the design-for-security approach isn't working—or at the very least, isn't working well enough," Eunice said in an e-mail.

People Security's chief security strategist, Herbert H. Thompson, believes that Microsoft's security-by-design initiative, planning security into products, has substantially reduced vulnerabilities. He credits the maturity of its product development life cycle and "unlimited management buy-in." Thompson said that a major difference between Microsoft and other software vendors is that it has one of the most mature security processes in the security development life cycle.

But Thompson questioned whether the software giant has worked to prevent the vulnerabilities that affect its customers. "From the software perspective, how well you think they are doing on [security] is influenced by how you measure whether it's working on not."

He explained: "There are more zero-day vulnerabilities being exploited than in the past. In the past, the things people had to worry about were worms, but those came long after Microsoft patched and fixed the issue. From a consumer standpoint, [the problem] was that individual companies were so slow at deploying patches, and not Microsoft's fault. Nowadays, many zero-days [newly disclosed exploits] are actively being exploited in the field."

The problem today is that the environment changed out from under Microsoft, said Thompson. Thompson sites a shift in attacker motivations, and a shift away from disgruntled systems administrators and "script kiddies" to the financially motivated hacker. "Some of the rootkit providers offered service-level agreements. The shift to economically motivated attacker has really put pressure on folks like Microsoft," Thompson remarked.

As a result, Thompson said, malicious users are looking more than ever before at browser and application-level vulnerabilities, because "that is where the money is for them." He believes that Windows Vista's browser constraints signal maturity in Microsoft's thinking, and that the company has resigned itself to vulnerabilities; he credits Microsoft for reducing their impact on the operating system.

Thompson sees one bright side: that for many organizations, secure means compliant to federal and state laws to disclose data exposure, and that there is now a business case built around security. "Being incompliant has consequences," he noted.

McGraw advocates shared responsibility for security. "People should not take a look at Microsoft and say, 'We need to figure out if they can do software security before we embark on our own.' They need to understand that they have got to address software security today," he argued. ▮

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Eclipse, Multicore Emphasized at ESC

Gore keynote, new Intel bike grab spotlight; Ada add-ons announced at show

BY P.J. CONNOLLY

With former Vice President Al Gore delivering the keynote, and Intel unveiling its new custom-designed Orange County Chopper, one might be forgiven for thinking that this year's Silicon Valley edition of the Embedded Systems Conference was all about glitz. But there was plenty of steak to go with the sizzle, as announcements in the areas of development tools, hardware components and supporting technology added up to plenty for the attendees to feast upon.

SD Times SHOW REPORT

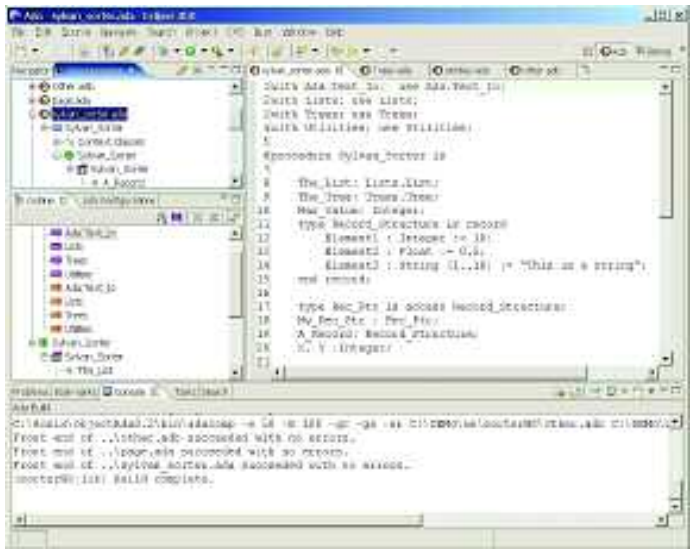
AdaCore announced the availability of GNATbench 2.0, an update to the Eclipse-based plug-in that adds advanced Ada language features and an integrated GNAT Pro Ada tool set to Eclipse-based development environments. GNATbench 2.0 includes new project wizards, syntax highlighting in the project file editor, a new toolbar for creating Ada elements such as files and projects, and the means to automatically generate package bodies from package declarations. For improved performance, Ada-specific semantic analysis is now handled by an Eclipse shared library, replacing a background process that invoked the GNAT Programming Studio.

Also on the Ada front, **Aonix** announced that it was leading an initiative to create an Ada Development Toolkit (ADT) for Eclipse, and offered its AonixADT to the Eclipse Foundation as the core baseline technology for the project. The company also released the source code for AonixADT, which includes an Ada-sensitive editor, build and debugger interfaces, and project-aware features for program unit manipulation.

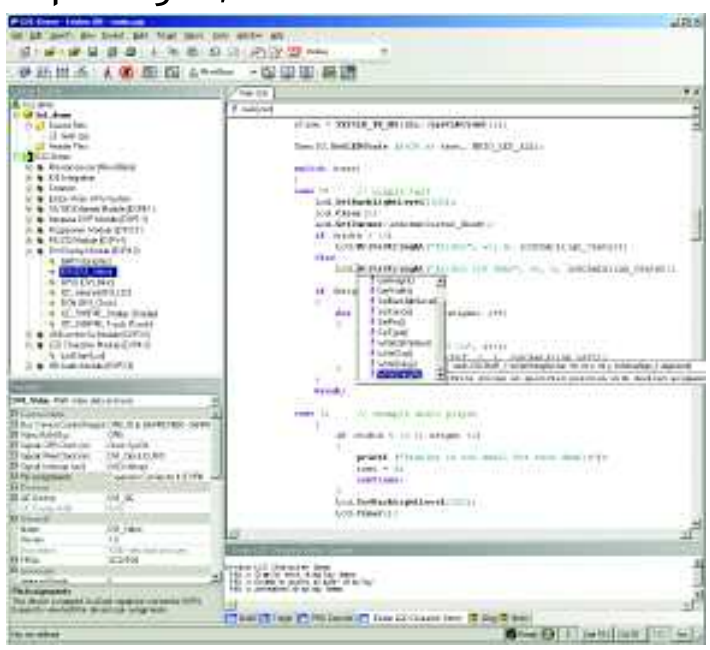
Digi International introduced what it called the first Ethernet networking kit for Microsoft's .NET Micro Framework. The Digi Connect ME JumpStart Kit is aimed at applications such as building and industrial automation, medical and point-of-sale systems. It includes the DigiConnect ME embedded module, a development/carrier board, and sample code with documentation.

Eridon announced the release of its UnifiedLogic development framework, which the company claims can allow device developers to move from concept to working prototype in as little as a day. The framework is a family of development tools, function-oriented protoyping boards called uCards, and operating system software.

Green Hills Software announced what it calls the fastest and smartest debug probe ever built, the Green Hills Probe V3. It works with Gigabit Ethernet and USB 2.0 interfaces and offers download rates of 10MB per second and faster, the company claims. It is available now for devices based on ARM, MIPS and PowerPC processors, and additional platform support is due later this year. Probe V3 allows on-board programming for a wide range of NOR flash parts, has built-in Python scripting and a Web 2.0 interface. The company also announced its Probe for Manufacturing, based on Probe V3.



Aonix has opened up the source code for its AonixADT toolkit, and offered it to the Eclipse Foundation as the core of a future Eclipse toolkit for Ada.



The Eridon UnifiedLogic IDE allows at-a-glance verification of hardware configurations when using the company's I/O prototyping modules.

Freescale announced a new Eclipse-based tool set for the Symphony line of audio digital signal processors (DSPs). Symphony Studio will support the company's DSP5672x family, and is backward-compatible with the DSP56300 family of audio DSPs and other devices, and will be released later this year. At the same time, the company announced the licensing of its e200 core family to system-on-chip and application-specific semiconductor specialists, through licensing specialist IPextreme.

Hitachi announced the release of Entier 2.0, a small-footprint relational database management system for embedded applications. The updated Entier adds the ability to search aliases and complex text.

LynuxWorks used the conference to announce the next generation of the LynxOS RTOS, featuring symmetric multiprocessing and support for POSIX interfaces that provide real-time process creation, scheduling and time-management capabilities. LynxOS 5 also incorporates a new Linux application binary interface (ABI) that allows third-party off-the-shelf applications to run in a hard real-time environment. The company also unveiled the Eclipse-based Luminosity 3 IDE, using build and debugging features from the C and C++ Development Tools project. Both are expected to ship by the end of June.

Macgraigor Systems announced that it has added support for several new processors in the AMD, ARM, Marvell and PowerPC families to its debug software solutions. The tools now work with AMD's Geode GX/LX processors, the ARM Cortex-M3 family, Freescale's MPC 83xx PowerQUICC II Pro series, and the Marvell PXA3xx chips.

Mentor Graphics' Inflexion Platform UI now has API support for the Nucleus OS, the company announced. The new Inflexion API allows developers to make interfaces fresh and easily updatable without requiring the software stack to be completely rewritten, claims the company. Inflexion automates UI logic and uses XML templates to manage UI behavior.

QNX Software Systems announced new operating system partitioning tools for multicore systems, aimed at secure high-performance applications. The new QNX Secure Partitioning for Multi-Core Processors offers customers the ability to partition both CPU and memory resources in fixed schemes, adaptable allotments or a combination of the two. CPU partitioning is available now; memory-partitioning features will begin beta test in August.

Real-Time Innovations has added new extensions to its data distribution service that allow the use of JREs that conform to the Real-Time Specification for Java (RTSJ). The RTI Data Distribution Service is now fully integrated with IBM WebSphere Real Time's RTSJ extensions, and other RTSJ extensions will be supported in the future. The RTSJ Extensions Kit is available immediately; the separately licensed data distribution service works with a variety of real-time and general-purpose operating systems.

S2 Technologies announced the Stride 2.1 Embedded Software Verification Platform, which adds the ability to automate and control C and C++ test code on the target device, a test scripting wizard and an enhanced user interface. The company claims that Stride 2.1 allows developers to quickly select and characterize APIs under test, and clarify ambiguities in complex data structures. It will be available in June, according to S2.

Sysgo announced a partnership with AMD to combine the chipmaker's multicore hardware technology with Sysgo's PikeOS paravirtualized RTOS, to allow the use of Linux and Windows with real-time applications. The joint solution is also expected to handle multiple Linux instances and allow the use of varying security and safety levels within the same hardware unit, but no date for product delivery was available.

Finally, **Tendril Networks** announced an improved version of its namesake software for ZigBee device developers. The Tendril Network Operating Platform update is expected to ship this quarter, and will work with ZigBee chips from Ember, STMicroelectronics and Texas Instruments; other major hardware platforms will be supported at a later date. The company also announced the Tendril Monitor, for diagnostics and monitoring of ZigBee wireless personal area networks, which are based on the IEEE 802.15.4 standard. ▮

Telelogic Advances Agile Modeling Tools

New Rhapsody offers SysML 1.0 alignment; SDL Suite supports 2, 3, 4G development

BY P.J. CONNOLLY

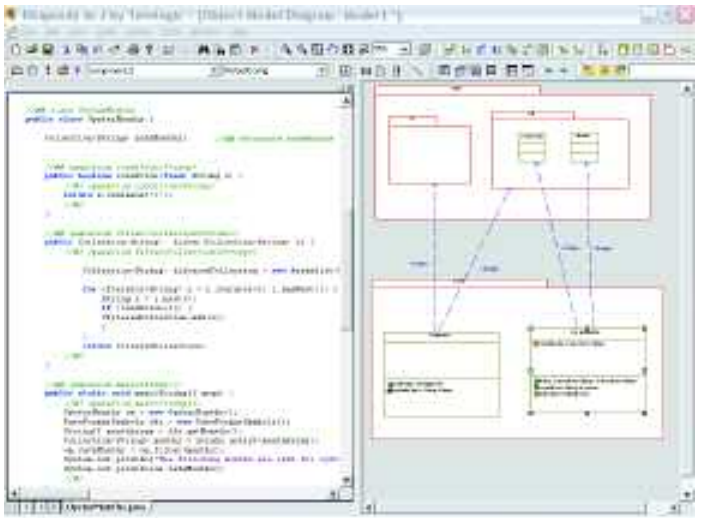
Telelogic announced an update to its model-based Rhapsody real-time and embedded development tools at the beginning of April, adding tighter alignment with the forthcoming SysML (Systems Modeling Language) 1.0 specification and greater support for agile development processes.

At the same time, the company announced an update to its SDL Suite for communication protocol developers, and a vertical implementation of Rhapsody Developer and the SDL Suite designed specifically for telecom customers.

The new release of Rhapsody is designed to allow developers to focus on code, while letting the software generate the models and documentation. Rhapsody 7.1 adds the ability to perform requirements-based testing on incremental parts of the application, in the code or the model. The company argues that this allows developers to start testing earlier in the development process, when fixing errors is less expensive.

Activity Diagrams in Rhapsody 7.1 can now be free-floating within a UML package, and diagrams now permit multiple associations of activities and statecharts, allowing for the description of alternate behaviors. Complex behaviors can now be captured with a drag of the mouse, and classes and components can be dragged to a "swim lane" and automatically associated with it.

Call Action nodes can be included in Activity Diagrams, for the visualization of calls to other operations, while other enhancements support the "code respect" features that maintain the structure of the code during modeling and reverse engineering. The Rhapsody update also incorporates enhanced integration with MathWorks Simulink.



Rhapsody 7.1 adds the ability to test apps through the code or model, letting developers fix bugs earlier, and at less expense, claims Telelogic.

Telelogic SDL Suite 6.0 is the company's model-driven tool for specifying and designing systems using SDL, the Specification and Description Language developed by the International Telecommunication Union's ITU-T standardization sector, the former CCITT.

The SDL Suite update includes UML integration, a new kernel architecture, and development host support for Red Hat Linux and Windows Vista. Japanese-language menus are enabled through Unicode, allowing globally distributed teams to work more closely than before.

SDL Suite 6.0 allows developers of next-generation communications protocols to cope with the ever-increasing barrage of data by supporting the use of thousands of instances and timers, and to trade off between performance optimization and resource conservation when necessary.

The suite also includes features that allow developers to optimize for 2G and 3G environments while preparing for 4G systems of the not-that-distant future, and automation that accommodates the alleged improvements in call reliability and data throughput of modern wireless networks.

When used together, Rhapsody and SDL Suite can provide UML modeling for applications and SDL modeling for protocols in what the company calls a seamless process. Both the core Rhapsody 7.1 and the SDL Suite will be available in May, and Rhapsody for Telecom will ship at the same time. ▮

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NetBeans Sprouting New Features

Java IDE gaining support from all sides

BY ALEX HANDY

When the first version of Xelfi found its way into the hands of Java developers, the IDE was an immediate hit. Originally designed to mimic Borland Software's Delphi rapid application development environment, the project eventually grew to become known as NetBeans. And while Sun Microsystems may not have expected its 1999 acquisition to bloom into a worldwide development community, the company is now putting great force behind its flagship Java IDE.

With the release of NetBeans 4, the project began its transition from general-purpose IDE to open source enterprise-quality development environment. Tim Boudreau, senior staff engineer and evangelist for NetBeans, has been working on the IDE since its early days, and he marked version 4 as the turning point for the project.

He said that the changes in version 4 "made it appealing to a lot of developers who said, 'I want my IDE to work with what I've got, not do anything special.'"

Dan Roberts, director of developer and Web 2.0 marketing at Sun, agreed with Boudreau. Roberts has also been on the NetBeans project since its early days, and he said that version 4.0 was the first edition that placed NetBeans on the level of its competition.

"That was where things started to go in the right direction." said Roberts. "[Version] 4 wasn't as good as 5, and it won't be as good as 6, but it's where we started getting our credibility back."

That credibility has allowed the NetBeans team to advance its environment to become one of the preeminent development platforms for any language. With the release of version 5.0 and 5.5, NetBeans has added dozens of time-saving tools, speed-inducing profilers and the Matisse GUI building system.

The secret to all this innovation, said Roberts, is the fact that the NetBeans team is willing to analyze the ideas that it finds in other projects, and to improve upon them.

Said Roberts: "Interestingly, as NetBeans has evolved over the years, many of the features have been inspired by different tools. The visual Web pack was primarily inspired by what Microsoft was doing in its ability to rapidly build Web applications. We clearly believed they had an advantage in the Java space to build out Web applications quickly. Visual Studio has really tight integration with some of the other pieces in the system. For us, that's the most inspiring piece."

But when considered in the context of other Java IDEs, NetBeans has one distinct advantage, said Roberts. "We can talk about innovation, all those other sub-areas, but it's the out-of-the-box experience where you get one complete development environment that can cover ME, SE and EE Java development," said Roberts, pointing out what sets NetBeans apart. "It was a core part of the NetBeans focus from day one since Tim and I were brought into Sun with the acquisition seven years ago."

NEVER A FULL ECLIPSE

Boudreau and Roberts detailed the reasons behind NetBeans' more structured and simpler approach to IDE design. "If you had to think about the architecture of OpenOffice.org to write a document, that would be a bug. We want the user experience to be very simple. You get the mobility pack; you don't get the 8 million modules. You get a plug-in, you drop it in, and it works," said Boudreau, referring to the sometimes difficult nature of installing Eclipse add-ons.

Other Java IDEs are also on the NetBeans team radar. In particular, Boudreau and Roberts talked about JetBrains' IntelliJ IDEA. "It's limited by the fact that the JetBrains team is a small group," said Roberts. "They can't leverage some of the things we have, like the Java teams in-house. We can mention the way in which Matisse actually got designed with the collaborations between the NetBeans team and the Java team."

Of course, because the NetBeans project is open source, Matisse has already been ported to the Eclipse platform. But that's just fine with Roberts. He said that the tool is so good for designing graphical user interfaces, his team is flattered to see it adopted by the competition.

But getting here was not that easy, said Boudreau. Now that Java SE 6 has arrived, NetBeans is receiving another visual makeover, though it's one that required little change to the underlying code. Back in the days of version 3.6, said Boudreau, changes in the way NetBeans looked had to be done by hand, within the IDE. When he rewrote the windowing system for version 3.6, Boudreau said the task was "like changing the carburetor on a car while it's running down the street without stopping."

At the same time, the NetBeans team was reworking its build and change systems to run on top of ANT, a move that they said made all the difference down the road. Boudreau said that, in the NetBeans user community, "there was talk from some folks in Texas telling me about how they have to mail each other Eclipse project files via e-mail when things change. I'm really glad our change system is built on ANT."

And those integrations with popular tools didn't end with ANT. Said Boudreau: "If I want to create a new Maven project, it has full integration with Maven. If I download a Maven project from the Web, I can just open it the same way we integrate with ANT for building. If I want to search for a particular file out there, [in the Maven repository] I can."

"There had been a general issue with [keeping track of] libraries, which is the problem which Maven solves nicely," said Boudreau. "We're not going to reinvent Maven. But we're making it a little bit nicer for people who have a project that's shared and they might have a library on their drive somewhere."

Integrations with SCM systems are also a major priority with the NetBeans team. Roberts said that the external groups are constantly building plug-ins for their repositories, and that the NetBeans

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NetBeans Sprouting Features

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team has an opportunity to build many new integrations themselves. "The end of the version control opportunity is never really there. There are so many SCMs. Subversion and CVS [are] a core part of NetBeans [and] have been for some time. As you get into the myriad versions of commercial ones, one of the exciting things about the market share gains NetBeans has had is a lot of those projects are building in support themselves. We're not building from scratch like we were two years ago. Now we've got the Subversion team working with us directly."

SIXTH TIME'S A CHARM

All of this work has led up to the forthcoming NetBeans 6.0 release. Roberts said that the new version should be unveiled at JavaOne this summer, but he added that the final version won't be ready until the fall.

Among the new features and changes in NetBeans 6, the most prominent is the expansion of the IDE to include many other languages. That means developers will be able to code Ruby, Python, C, C++ and Java in NetBeans. The team is also adding facilities to make it easier for third-party developers to add support for other languages to the IDE. These facilities include methods for describing white space needs, indentation, color-coded code and syntax highlighting.

"We're going very much after the scripting market," said Roberts. "New developers are coming out of college and high school even. These folks are learning scripting languages as their first languages. It's important to get to them early."

But the popularity of scripting languages isn't the only benefit to NetBeans' adding support to its platform. The new efforts at Sun to implement many scripting languages in Java adds new worlds of possibilities to scripted applications.

"We hired the JRuby guys," said Roberts. "The thing that's cool about JRuby is that there are all these Java libraries out there you can now access in Ruby. Like a library for diff'ing lists. If I were writing something in Ruby, that's handy to do, [but] do I really want to rewrite that in Ruby? I'm sure Rails advocates might disagree with me. The way I see it is the stuff where if it goes wrong, the airplane crashes—I'd want to write that in a strongly typed language. The other stuff, like snippets of HTML, the froth on top of the back end, where it's something that's going to change rapidly—that's something you want a scripting language for. What's the right tool for the job in these common tasks? Five or seven years ago, when the Web was young, nobody knew what the things you needed to do repeatedly were. We're finally maturing in terms of what tools are appropriate for what things."

But while the move to support scripting languages and other mainstream languages in the IDE is a major shift for the NetBeans team, it's not the most powerful change for version 6.0.

That title falls to the newly rewritten core editor. "The other major piece is a complete overhaul of the core editor itself," said Roberts. "You have the ability to use a completely new editor. For NetBeans, the editor has been something of a work-in-progress for some time. This is really where we believe we'll be moving past IntelliJ and Eclipse."

It's still evolving, of course. "Not all of the refactorings are implemented over the Java infrastructure yet. We will have the full suite of refactorings when 6.0 comes out in the fall. This was a collaboration between the NetBeans team and the Java team."

Those should help to narrow the gap between NetBeans and its competition. Roberts said that the combination of new refactorings and a faster core editor should make NetBeans the top dog. But it's the support for the improvements in Java SE 6 that will help to make NetBeans stand out, said Roberts.

Boudreau used a sample application to demonstrate the power of the new profiling features in NetBeans. "I created the generic code-name generator. When I first pasted the text into the generator, the whole application froze for a second. That's a place I'd like to profile. The first thing you notice is that we're starting up and the window is still not on the screen. It's slowing down the whole virtual machine," said Boudreau, showing off the application.

"Traditional profiling has two problems," said Boudreau. "One, it slows everything down. Two, it doesn't give you the information you're actually after.

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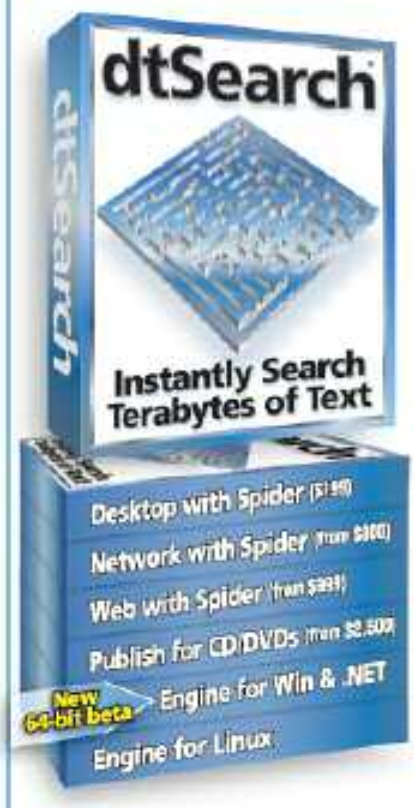

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NetBeans Sprouting Features

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Generally, you don't want to profile the whole application—only one part. NetBeans Profiler can specify a single method to check. You can save the snapshot. You can do optimizations and compare the snapshots."

As if optimizing applications were not enough, Boudreau went on to demonstrate more features of NetBeans 6.0. One of those is the ability to rapidly generate and test a Web service. Boudreau demonstrated how to do this using his code-name generator application again. "You take the code that analyzes text and generate a Java EE application. It auto-generates a new application that's built with ANT. We can add a session bean. And it automatically generates a page for testing Web services."

That automatically generated test page included the text box for inputting seed text, and automatically output the code name generated. Boudreau then took the same program through NetBeans' automatic Java ME generation facilities. Here, he demonstrated the ability to automatically create the various screens of information needed in a mobile Java application.

PART OF SOLARIS STRATEGY

Roberts also sees NetBeans as a key component of the new Solaris strategy at Sun.

"Unix workstations, as a market, has really gone away," said Roberts. "We still have a really good business around workstations and Sun Ray. It used to be, when you walked into a scientist's office, there was a Solaris workstation there. That's what computer scientists did. That's changed because the way in which we used computers changed. Look at the way in which the professional workstation became the primary interface for the second world you live in. That change that has occurred, the sociological impact has created pressure for a single type system. [It created] a natural monopoly and the consumer culture [that] Microsoft was able to capture. [It] drove all that innovation through one interface type."

Roberts said that the need for MP3 players, movie players, support for desktop tasks and PowerPoint all contributed to the decline of the workstation. But that may change soon, said Roberts, as Sun refocuses its Solaris efforts to include a new distribution aimed directly at developers. Solaris Express, Developer Edition, is an all-in-one development workstation-targeted operating system. Of course, it has all those other things developers need to get work done, such as music players and e-mail programs, but it also includes a full working version of NetBeans that is installed by default.

With so many new features arriving on the NetBeans platform this fall, it's hard to ignore the simplicity and time savings offered by the IDE. And with support for Java SE 6 bringing speed, optimizations and a faster JVM to NetBeans, it looks like the sprouts of Xelfi are finally growing into trees. ■

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FROM THE EDITORS

Web 2.0 Changes Everything

The Web, as we know it, is dead. Long live Web 2.0—a next-generation platform for rich applications, mashups and more. With the first version of the Web, with its fairly static HTML content and dynamically generated pages, the difference between a Web application and a local or client/server application was clear. With Web 2.0, the lines are becoming more blurred every day. This inexorable trend is good for the enterprise, good for consumers and good for developers. However, it would be a mistake to think of Web 2.0 as simply an outgrowth of AJAX or Ruby on Rails. This is a new paradigm, and enterprise developers and software companies must adapt to the new reality.

As you can read in this issue's cover story "When Software Technologies Collide," our IT departments are seeing both opportunities and challenges. Software as a service, service-oriented architectures and Web 2.0 applications break down the classic barriers between silos. The distinction between intranet, extranet and Internet is disappearing.

Our customers (internal and external) expect us to leverage SaaS, SOA and Web 2.0 to improve the quality of enterprise and commercial software, while simultaneously reducing its development and maintenance costs. Paradoxically, our customers also expect that security will not only be preserved, but also enhanced, and that development cycles will be shorter.

Can we deliver on those expectations? Yes. But this will require a radical change in our approaches to the whole life cycle, from requirements gathering to architecture, from coding to testing to deployment. For many organizations, agile methodologies may seem like the silver bullet, because those methodologies are better at responding to constantly changing requirements. However, we should not be lulled into believing that formal requirements are no longer required, or that we can exist in a world of permanent beta releases.

Enterprise and commercial software development for the rest of this decade, and beyond, is a whole new ball game, and the rules are still being written.

Turning Professional

We've heard the lamentations from both sides for years now: "Business people just don't understand the technology side," IT managers cry; "Why can't my IT department write software that does what I need it to do," business-side employees wail.

Software companies continue to come up with ways to bridge the gap—requirements tools that understand plain English, pairing business executives with developers during the programming phase.

And now, Carnegie Mellon University West is offering a Masters of Software Management program designed to create the next generation of business executives who can understand the company's needs and apply them to software development. It is said to be one of the first of its kind in the world. Classes are available only to people already working as software engineers. But there's the rub.

Many developers don't approach software development as an engineering discipline. They see it as an art—equating their struggles to deliver the perfect algorithm with the inner pain of a Jackson Pollack or Sylvia Plath. But as Steve McConnell points out in his seminal 1999 book, "After the Gold Rush: Creating a True Profession of Software Engineering," engineering provides the framework for implementing the moments of inspiration. Without a solid engineering foundation, the flashes of brilliance could never be captured in a practical way.

As the costs associated with software failure rise, a program such as Carnegie Mellon's seems like a bargain. We can get behind any effort that raises the level of professionalism in the industry, and that helps software teams deliver software that not only works, but does what the business needs it to. ▮

The Trustworthiness Framework

At a recent Department of Homeland Security workshop on software assurance, most of the practitioners in attendance equated software assurance with automated software testing. One might wonder, what does automated software testing have to do with software assurance?

In order to achieve software trustworthiness in the limited amount of time that's generally allowed to produce software, a combined effort of automated software testing and security testing is required: The Software Trustworthiness Framework (STF) is needed.

Daily we are bombarded by media alerts of new security breaches; the latest example was UCLA having to alert 800,000 people to a data breach.

Josh Bloch, chief Java architect at Google, said in a recent statement, "Regardless of how talented and meticulous a developer is, bugs and security vulnerabilities will be found in any body of code—open source or commercial. Given this [inevitability], it's critical that all developers take the time and measures to find and fix these errors."

Developers, however, are strapped cranking out new features while trying to meet often unreasonable deadlines. First-to-market is key; beating the competition is the goal. Given this dilemma, where software developers alone cannot be responsible for software assurance, we need to look to other resources to help us win the software trustworthiness battle. Who is better suited to help a developer conduct security testing than the software testing groups already in place?

In the traditional software development life cycle, software trustworthiness is often an afterthought, and security and testing efforts are delayed until after the software has been developed. Meeting deadlines is key, at all costs, including that of trustworthiness, yet vulnerabilities are an emergent property of software that appear throughout the design and implementation cycles.

WHERE THE FRAMEWORK FITS IN

Currently, much of the security testing that is done after the software has been implemented, such as paying an external party to perform security testing, is just a Band-Aid solution. It is tempting for security testing teams to focus purely on the mechanics of testing the security of a software application and pay little attention to the surrounding tasks required of a secure software development life cycle, such as automated software testing. This is where the STF comes into play.

The most effective software trustworthiness programs start at the beginning of a project, long before any program code has been written. An effective security process is one that is used throughout the development life cycle and one that employs automated testing technologies.

The Automated Testing Lifecycle Methodology (ATLM) described in my book "Automated Software Testing" is a structured methodology, supports the successful implementation of automating testing, has been implemented by companies throughout the world, and is recommended by various tool vendors. The ATLM approach is consistent with rapid application development efforts, including engaging the user early in the development cycle.

A structured methodology has emerged to support the successful implementation of secure and trustworthy software. In the Secure Software Development Lifecycle (SSDL), security issues are evaluated and addressed early in the system's life cycle, during business analysis, throughout the requirements phase, and during design and development. This early involvement lets the security team provide a quality review of the security requirements specification, attack use cases and software design. The team also will more completely understand business needs and requirements and their associated risks. Finally, the team can design and architect the most appropriate system environment to generate a more secure design.

Amalgamating the ATLM with the SSDL combines automated software testing with software security testing into the Software Trustworthiness Framework.

The ATLM has six primary processes:

- Decision to automate testing
- Test tool acquisition
- Automated testing introduction process
- Test planning, design and development
- Test execution and management
- Test program review and assessment

The SSDL has six primary processes that are intertwined with the ATLM:

- Security guidelines, rules, regulations and oversight
- Security requirements and attack use cases
- Architectural and design reviews/ threat modeling
- Secure coding guidelines
- Black/gray/white box testing
- Determining exploitability

Implementing the SFT will allow for repeatable and consistent verification of new releases and software patches. It will evaluate the trustworthiness from an end-to-end system perspective, and will verify that the integration of components yields a trustable system. ▮

Elfriede Dustin is a software testing and QA consultant.

THOUGHTCAST

WHEN APPLE TV SHIPPED last month, the reviews came pouring in. Consensus is often very telling, and the consensus is that Apple did not initiate an iPod-like revolution in home entertainment. Let me give you a one-word explanation: flexibility. iPod's design enabled an entire ecosystem of devices to build up around it, such as digital voice recording and terrestrial radio tuners. Apple TV lacks a built-in TV tuner that would nourish the development of a TV-centric ecosystem. Online forums are abuzz with posts about how it has no DVR capabilities and cannot be used to watch TV. Apple TV, with iTunes, only does what software including Windows Media Center Extender has already been doing. A post to the AppleNova forum, an Apple enthusiast site, questioned why it was necessary to buy one when game consoles, like Xbox, already did the same thing. Will Apple out-innovate Microsoft, Sony and other hardware vendors and gain a foothold in the living room? Or could it simply become a case of Apple persevering because of its momentum? Apple, be warned: Momentum can quickly turn into inertia.

—David Worthington

WITH OODLES OF CONFERENCES, talks and seminars coming up this spring, it's highly likely that you'll soon find yourself on a plane. And it is air travel that remains the single loose gear in the massive mechanism that is forming around on-demand applications. This past month, I showed our edit team Basecamp.com, a site that allows for wiki functionality, geared toward collaborative document development. Unfortunately, no sooner had I mentioned that this would be a great place to collectively edit our articles, than someone mentioned that this practice would remove one's ability to write and work while flying. Naturally, I had to give up my exuberant evangelism. It's one thing when beneficial technology is rendered impotent by lack of enthusiasm in the users. It's entirely another when a whole industry has conspired against its use. And since we won't likely be seeing ubiquitous electricity and Ethernet in our coach-class seats anytime soon, the SaaS-ifying of the business world may just have to wait.

—Alex Handy

I'VE BEEN VISITING COLLEGES recently with my oldest daughter, who's a junior in high school, and have been struck by the impact of computers on their lives. Kids now add "Is there free wireless Internet available?" to the more mundane questions about dining hall food and the size of freshman lecture classes. Most of the dormitory rooms we were taken into did not have wireless; instead we saw wired Ethernet ports (I can't imagine the bandwidth issues that arise when an entire dorm full of kids tries to gain access—and complete downloads—at the same time. The colleges did have a few common areas with wireless connectivity, but they seemed small and spread out across the campus. Also, many of the colleges have their own networks for the "facebook" social network. I guess that's so students can "poke" each other about upcoming exams—or where the next mixer is.

—David Rubinstein

LETTERS TO THE EDITOR

A Prototype Query

As to your article "A Prototype for Browser Compatibility" [April 15, page 1], I believe JQuery is far better than Prototype in features and ease of use and has a huge community behind it. John Resig, the main developer, works for the Mozilla Foundation. Check out these sites: jquery.com and ejohn.org. Thanks.

Mladen Mihajlovic

WHERE'S APPFORGE?

I am a developer and have a client running a Crossfire solution on Symbol equipment. I am looking for someone who could share information on the current situation at AppForge Inc.

I understand they have closed their business, effective about March 14, 2007. Do you know if they will be re-opening, either as a reincarnation or after being sold? Do you know if there are any arrangements being made for renewing client licenses, maintenance, etc.? Do you have any information at all about their current and future status?

Tim Rice

Editor's note: AppForge has been acquired by Oracle, according to an Oracle spokesperson. The spokesperson said that details about the transaction were to be found on the Oracle Web site, but as of press time they had not appeared. No information about client licenses or maintenance could be ascertained, and none of the AppForge principals could be reached for comment.

COMMENTARY ON JAVA

I miss Allen Holub's wit and insight, especially on the Java front, which is most relevant to my work as a defense contractor. I wonder if dropping his column is "itself an interesting comment on the state of Java."

Kelly Mulheren

Editor's note: Allen Holub wrote the JavaWatch column for this newspaper until October 2006.

WHAT DO YOU THINK?

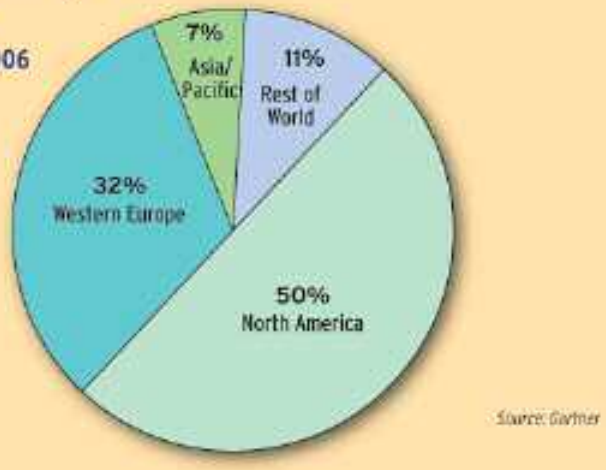
Letters to SD Times should include the writer's name, company affiliation and contact information. Letters become the property of BZ Media and may be edited. Send to feedback@bzmedia.com.

CORRECTION

WindowZones is a least-privilege security program from Xeriton's ByteCrusher Labs. Its name was incorrect in a story in the April 1 issue on Microsoft UAC.

DATA WATCH

North America Largest BPMS Market, for Now



Analysts at Gartner's March BPM Summit in London indicated that this year's global market for Business Process Management (BPM) suites will exceed US$1 billion, and will be one of the fastest-growing markets through 2011. The firm estimates that growth in the BPM market will peak in 2008 in most markets; currently, North America and Western Europe represent the largest regional markets, but the Asia/Pacific region is expected to show more accelerated growth over the next two years.

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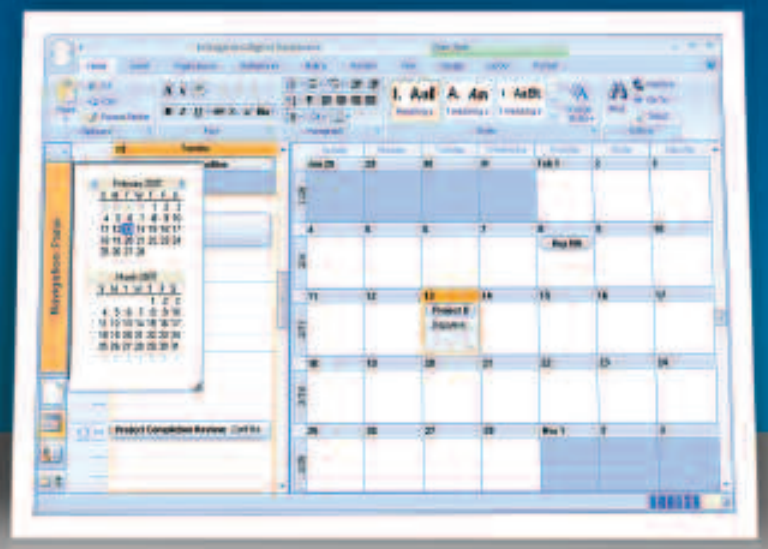

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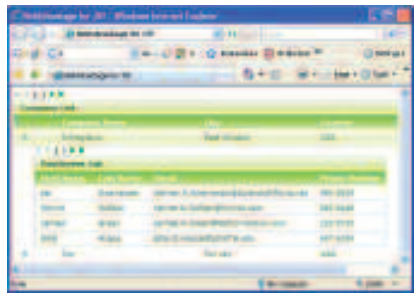

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Off-the-Shelf Education

I normally leave my summer reading column until June, but between global warming and some exceptional offerings from the publishing companies, the time seems ripe to suggest some books to accompany you to the beach. In the interest of full disclosure, I should state that I'm friends with several of the authors whose works I'm recommending.

I've already written in this column about my favorite book of last year, "Refactoring Databases" by Scott Ambler and Pramod Sadlage. Along with Ambler's "Agile Database Techniques," this book brings database development into the change-embracing, unit-tested 21st century.

Manipulating relational databases stands in complex relationship to manipulating text-based source code and "regular" software development. On the one hand, relational theory is a vastly more stable foundation than mainstream programming paradigms; even the most recalcitrant corporations understand the value of their data stores; and database servers are tremendously sophisticated tools. On the other hand, programming databases, whether manipulating data or table structures, is rarely treated with the same kind of respect that we give to compiled code; there's often an assumption that the database will somehow be trivially derived to suit the needs of the "real code," or perhaps, that a tyrannical DBA is forcing compromises on an otherwise pristine design.

In truth, databases in the real world scream for refactoring and unit-testing, and either slavish devotion to or callous disregard for existing database structure is among the most common mistakes I see. (Just this morning, I spent an hour and three-quarters in a design meeting that centered around this very problem.) These two books plainly and simply saved my butt in a big project last year, and I think it's a rare bookshelf where they won't find a permanent spot.

Windows & .NET Watch

Whatever book you may have used previously for "the one book about OOA&D to have if you're having only one," you may well want to retire it in favor of "Head-First Object-Oriented Analysis & Design" by Brett McLaughlin, Gary Pollice and David West. I've not been the biggest fan of the "Head-First" series. The graphically busy design of these texts and their multimodal approaches to learning are definitely in keeping with modern pedagogy, but I'm not at all convinced that this is necessarily the best way to learn, for instance, a programming language.

OOA&D, though, with its high concept count, communication demands and specialized jargon, is excellently suited for the approach. Even more important, the book does a good job of covering the broad array of subjects in play in modern OOA&D, including such things as the current emphasis on iterative development and testing and their influence on analysis and design.

The book is light on UML—perhaps too light. You don't have to work for IBM Rational to like Activity Diagrams, for instance. But pair "Head-First OOA&D" with Martin Fowler's still-unsurpassed "UML Distilled," and you've got 90 percent of what you need to do OOA&D. The other 90 percent of what you need is experience. (And if you haven't yet experienced a software development project that's consumed 180 percent of effort…)

Charles Petzold's work is always noteworthy. Last year brought "Applications = Code + Markup," which is the best tutorial on Windows Presentation Foundation I've seen. This summer we can look forward to a book by Petzold on 3D programming for WPF, but I want to recommend his book "Code: The Hidden Language of Computer Hardware and Software," which came out in 2000. "Code" is a technical history of computers, touching on mechanical predecessors (abaci, Napier's bones, Babbage's works) but focusing primarily on what we've done so far by combining Boolean logic, information theory and electronics.

Code is, by popular standards, technical (it doesn't have pictures of trains carrying 1s and 0s), but if you want some fiber in your diet, pair it with "Inside the Machine" by Jon Stokes. Subtitled "An illustrated introduction to microprocessors and computer architecture," this is a handsome text that gets to the nitty-gritty of branch prediction, cache architecture and vector execution. As is inevitable with a book this close to the metal, it's already a tad outdated, ending with some too-brief words on the Intel Core 2 Duo.

If your eyes are too tired to read, I highly recommend the audiobook version of John Hodgman's "The Areas of My Expertise," which he labels "an almanac of *complete world knowledge*." Not a lot of developer-specific stuff, but Hodgman is the guy who plays the PC in those Macintosh ads, and he's accompanied on guitar by Jonathan Coulton, composer of the anthem "Code Monkey," and the obsessive list-making nature of the endeavor makes it clear: He's a member of our tribe. ∎

Larry O'Brien is a technology consultant, analyst and writer. Read his blog at www.knowing.net.

A 'D' in Programming

The Tiobe.com Web site tracks the interest and activity in more than 150 programming languages. It not only keeps track of the relative standings of all these languages, it also shows the comparative growth or decline of the top languages year over year, as well as month-to-month changes. It's a fascinating site to check on an occasional basis.

Some recent trends are actively reflected in the posted numbers. For example, we see Ruby's skyrocketing advance: It jumped from 21st place to 10th in the most recent 12 months. It is the only new entrant into the top 10 during that period (the language that fell out of the top 10 to make room for it was Delphi, which fell to 12th place.) JavaScript, on the basis of its use in AJAX, has also risen nicely from 10th to 8th.

In general, the top few places show comparatively little change. Like last year, the first six positions are, in order: Java, C, (then a big drop), C++, PHP, Visual Basic and Perl.

One language that has surged into 14th place (up a full six places and now ahead of Pascal, Fortran, Ada and COBOL) is one I suspect most readers have never heard of: D.

Available at no cost (www.digitalmars.com/d), D is the brainchild of Walter Bright, the same fellow who wrote the Datalight C compiler, the Zortech C++ compiler, and Symantec's Visual Café Java compiler—all of which were regarded as very fast products in their day. As the Digital Mars Web site states, the D language combines the high performance of C/C++ with the productivity features of Ruby and Python. This is a fair description.

Integration Watch

The syntax is reminiscent of C++ and Java and, like those languages, it's object-oriented and statically typed. If you want to use D without exploring its many interesting features, you could view it as C++ with garbage collection. But such an approach disregards some impressive capabilities. These include strings as first-class objects, resizable arrays, functions that fall somewhere between C#'s delegates and Ruby's closures, string-based switches, interfaces, templates, nested and inner classes, support for all C99 data types, and a default 80-bit floating point. It also has syntactical sugar for for-loops and other constructs.

As I've discussed several times in the past, a substantial portion of the value of a language is in its libraries. D has a good set of these libraries, but it has the distinct benefit of being able to link to native libraries written using C and Pascal parameter conventions. Versions are currently available on Linux, Mac OS and Windows.

Because it was written by a code-performance freak, it compiles to native code that runs screamingly fast. The benchmark suite at Debian.org (shootout.alioth.debian.org/gp4) shows that after C and C++, D is the fastest language around. That's fast!

There are actually two versions of the D compiler and linker. One from Digital Mars, of which most parts are open source. The second is a D front end to GCC (at sourceforge.net/projects/dgcc). Many projects are under way to create native ports to D of existing libraries, including an ambitious project to port open source Java libraries. Of these, the port of the SWT library (used for graphics by Eclipse) is substantially complete.

The mailing lists and community are active, and Bright frequently participates in discussion and problem resolution. Most of the members of the community see D as a vastly improved C++ and occasionally as a faster Java. What is inspiring is how D has managed to pull itself up to 14th place in the Tiobe rankings without having any of the usual accoutrements of language success: There is no killer application, no book by the Pragmatic Programmers nor from any leading publisher, and it's not the default language of any known application or community that can drive it. Rather, D has simply grown steadily by word of mouth over the past five years due to the need developers have for the speed of low-level languages with garbage collection and intelligent high-level features.

In many ways, D has the feel that the Ruby community had before the advent of Ruby on Rails catapulted the language onto everyone's radar screen: It's a language that's been well thought out and that makes programming a pleasure. Its big advantage over Ruby, however, is performance. So the next time you need to drop into C or C++ coding, and you suddenly get the feeling that there has to be a better way to get the work done quickly, take a stab at D. You'll like what you find. ∎

Andrew Binstock is the principal analyst at Pacific Data Works. Read his blog at binstock.blogspot.com.

You're Speaking My Language

I think I woke Ami Cohen from a sleep when I called him in mid-April to discuss an idea he has for giving machines the ability understand vocal cues at a high level.

If I did wake him, Cohen is one of those people who doesn't take a long time to clear his mind and regain his bearings—he was off on a 90-minute monologue that careened in a number of directions within seconds of exchanging greetings with me.

Industry Watch

Let me back up a bit. Cohen reached out to me last month to talk with him about his ideas for an EchoLogical Machine, which executes business process management for distributed manufacturing by robots. An Israeli by birth, Cohen has lived in British Columbia since 1966. He says he has a background in marine engineering, and has worked in real estate and other businesses before committing to his flying sailboat project. (The boat doesn't actually "fly"—it rises up to ride on top of the water, leaving no wake.)

He has a vision for In-Cell Nomadic Intelligent Manufacturing and Management Factories, which will include the robots for forming the Rigid-Hulls necessary for the flying boat project, and ultimately becoming part of his FlexibleFINS project, as the fins attach to the hulls of his boats. For this kind of work, Cohen sees the need "to have a machine I can talk to like I'm talking to you," he said.

At this point in our conversation, Cohen started talking about upgrading natural languages, the creation of USCIIIIII (which we'll get into in more detail later on), and teaching machines elements of speech.

All of this is in his head for now. The concepts are quite interesting, to say the least, and Cohen is looking for partners to help him build out the ideas. Read on, and let me know what you think of Cohen's efforts.

"Machines need to recognize more than identity," he said. "Speech is not a monotone thing. Talking is like singing. The goal is to have a thinking and singing machine."

Cohen sees a future in which we can teach machines all the ways to say the letter a, for example: a, aye, ay, ah; or b, which could be buh, bee, bih, beh. "You can give it a true voiceprint," he said.

To do so, he's created something called the Universal Standard Code for Internationally Intelligent Intensively Interactive Information Interchange (the aforementioned USCIIIIII). "This will be the operating font that can recognize multiple languages, to have accurate voiceprint recognition," Cohen claimed.

Only with something like USCIIIIII can machines begin to share a culture with the human it is interfacing with, Cohen stated. The Echological Machine that Cohen has devised in his mind is the logic mechanism that describes how to instruct a machine in binary to understand speech. By adding super-vowels, or diacritics, to English, Cohen is creating an extra layer of instruction for the machine—the symbolic instruction code that has the logic about sentences, so the machine will know the difference between "Go to the bank and make a deposit" and "The river bank is muddy" and "The airplane is banking."

Perhaps because of his Israeli upbringing, Cohen believes Hebrew can be the model for upgrading natural languages because Hebrew is a structured language that has a root system of single-letter words and double-letter words that are the root of all other words. "In English, you have architect, and architecture, but then it goes off to build, building, then brick, bricklaying. They aren't true roots," Cohen said.

Believing that this all can be done takes faith, and Cohen has no shortage of that. In fact, he says the Hebrew language is the true vocal signature of nature, where communications can be seen and heard by listening to all sounds around us at all times. "It is a language of God, for simple people," he says.

Cohen speaks at 110 miles an hour, changing topics the way impatient drivers change lanes. Following him can be difficult. But it seems to me there are some very valid points in all that he says, and Cohen said he's looking for partners to help bring his visions to fruition.

In an e-mail follow-up to our phone conversation, Cohen wrote he would like to open doors "to teams already advanced in the art of universal natural logic and languages' powers in automation and for computing as well as remotely operated intelligent universal robotics."

You've heard what Ami Cohen thinks. We want to hear what you think. ▮

David Rubinstein is editor-in-chief of SD Times.

BUSINESS BRIEFS

Oracle has acquired **Hyperion**, a business performance management (BPM) software vendor. It assumed majority ownership of Hyperion after it purchased 91.7 percent of all common stock outstanding through an initial cash tender offer of US$52 per share. The transaction was valued at approximately $3.3 billion. The remaining shares were accepted for payment during a subsequent offering period and were tendered at the same price as before. All remaining Hyperion shares were canceled and converted into the right to receive $52 per share under Delaware state law. Hyperion is now a wholly owned subsidiary of Oracle. Oracle CEO Larry Ellison said in a statement that the combination of Hyperion's BPM software and Oracle's Business Intelligence tools and analytic applications form an end-to-end performance management system . . . **ILOG** has acquired **LogicTools**, which makes supply chain planning applications, and will run it as a division of the company. The acquisition brings together a leading company in supply chain network design and inventory optimization with a leader in detailed scheduling solutions, to provide a broader range of supply chain applications to customers. LogicTools co-founder Edith Simchi-Levi will become vice president of operations for ILOG. Financial terms of the deal were not disclosed.

EARNINGS: Oracle's 2007 Q3 GAAP earnings are in. Third quarter revenues were US$4.4 billion. After operating expenses, interest, depreciation and taxes, net income totaled $1.03 billion. Its operating expenses were relative to last year's, and the total earnings per share were 20 cents. In comparison with 2006, revenues grew 27 percent, and net income and earnings per share were, respectively, 35 percent and 36 percent higher. Oracle reported that software revenues grew 25 percent to $3.5 billion followed by service revenues, which were up 36 percent to $916 million. Applications new license revenues accounted for most of the software sales growth, followed by database and middleware new license revenues. Oracle CFO Safra Catz stated that revenue growth was across all product lines and geographies. Oracle's cash and cash equivalents were more than $1 billion less than in Q3 2006. ▮

EVENTS CALENDAR

IDUG North America — May 6–10
San Jose
INTERNATIONAL DB2 USERS GROUP
conferences.idug.org

VSLive — May 6–10
Orlando, Fla.
FAWCETTE TECHNICAL PUBLICATIONS
www.ftponline.com/conferences/vslive

JavaOne — May 8–11
San Francisco
SUN MICROSYSTEMS
java.sun.com/javaone/sf

WinHEC — May 14–17
Los Angeles
MICROSOFT
www.microsoft.com/whdc/winhec

STAR EAST — May 14–18
Orlando, Fla.
SOFTWARE QUALITY ENGINEERING
www.sqe.com/stareast

RailsConf — May 17–20
Portland, Ore.
O'REILLY MEDIA AND RUBY CENTRAL
conferences.oreillynet.com/rails

Open Source Business Conference — May 22–23
San Francisco
IDG WORLD EXPO
www.linuxworldexpo.com/live/13

Six Sigma for Software Development and IT — May 22–23
Boston
IQPC
www.iqpc.com

Tech-Ed — June 4–8
Orlando, Fla.
MICROSOFT
www.microsoft.com/events/teched2007

IBM Rational Software Development Conference — June 10–14
Orlando, Fla.
IBM
www-306.ibm.com/software/rational/events/rsdc2007

eBay Developers Conference — June 11–13
Boston
EBAY
ebaydevcon.com/devhome

Apple Worldwide Developers Conference — June 11–15
San Francisco
APPLE
developer.apple.com/wwdc

Better Software Conference & Expo — June 18–21
Las Vegas
SOFTWARE QUALITY ENGINEERING
www.sqe.com/bettersoftwareconf

BREW 2007 Conference — June 20–22
San Diego
QUALCOMM
brew.qualcomm.com/brew/brew_2007

SOAWorld/Enterprise Open Source Conference & Expo — June 25–27
New York
SYS-CON
www.soaeosconference.sys-con.com

Open Source Convention — July 23–27
Portland, Ore.
O'REILLY MEDIA
conferences.oreillynet.com/os2007www.agile2007.com

For a more complete calendar of U.S. software development events, see www.bzmedia.com/calendar.

Information is subject to change. Send news about upcoming events to events@bzmedia.com.

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